CENTER FOR TESTING AND EUROPEAN CERTIFICATION LTD

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REPORT

FROM TESTING

№ 1 21 0168 AT / 04.10.2018

1. **Reflective Pavement Marker – Road stud RST SW1 — one way, white color, for application with bolt screw – type B**

Producer: MUVHAR INDUSTREY LTD

2. **Test requested by:**

Muvhar Industrey LTD, 18, Dereh Hagana Tel-Aviv Israel, zip code 67752, application № 2-0741/20.12.2017

3. **Test method**:

ASTM D 4280 – 08 Standard Specifications for Extended Life Type, Nonplowable, Raised Retroreflective Pavement Markers
EN 1463-1:2009 Road marking materials - Retroreflecting road studs - Part 1: Initial performance requirements

4. **Date of delivery of samples to the laboratory**: *08.02.2018*

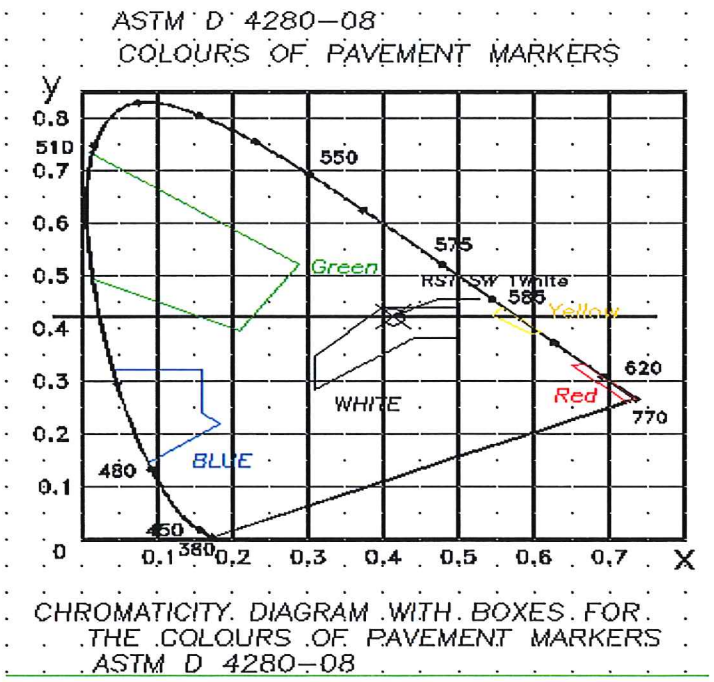
5. **Quantity of test samples**: *33 numbers*

6. **Date of test**: *19.02.2018 ÷ 19.03.2018, 04.10.2018*

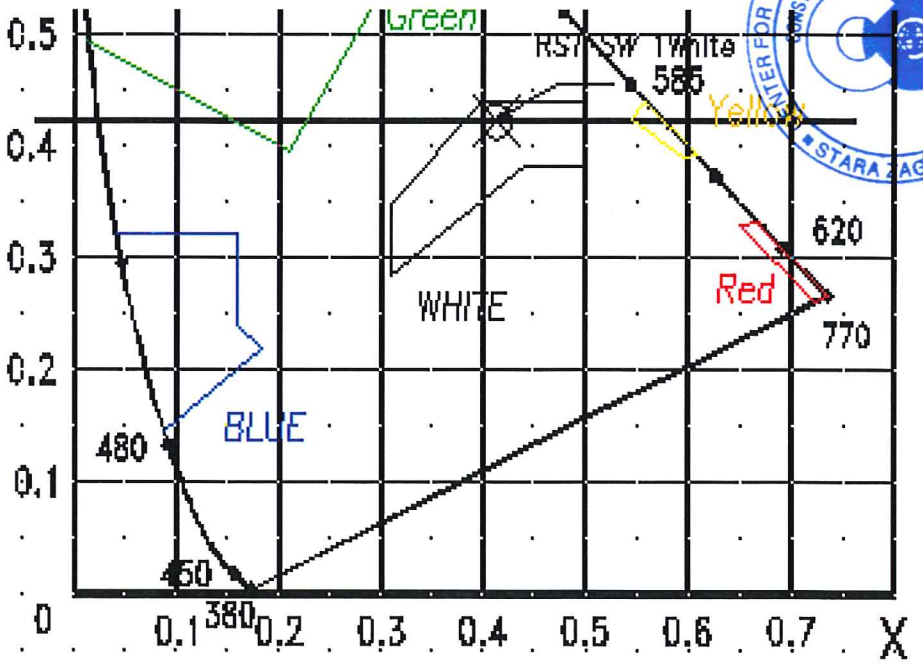
Laboratory manager: .....
(eng. H. Angelova)

7. Test results:

№	Name of testing / characteristic	Unit of measure	Standardized methods	Diary sample №	Test results	Test conditions	Test method deviation
1	2	3	4	5	6	7	8
1.	**Color Retro reflectivity – ASTM D 4280-08**						
1.1	Coefficient of Luminous Intensity R_I – light sours A - the angle $\beta_2 = 0^0$	[mcd/lx]	ASTM D 4280-08 clause 9.1	0146-0/ 1÷10	283 mcd /lx ± 3 mcd /lx	In accordance with the standard	no
1.2	Coefficient of Luminous Intensity R_I – light sours A - the angle $\beta_2 = +20^0$	[mcd/lx]			116 mcd /lx ± 3 mcd /lx		
1.3	Coefficient of Luminous Intensity R_I – light sours A - the angle $\beta_2 = -20^0$	[mcd/lx]			115 mcd /lx ± 3 mcd /lx		
1.4	Coordinates of color x, y	-	ASTM D 4280-08 clause 9.3		x = 0.4128 ± 0.0008 y = 0.4220 ± 0.0016		



CHROMATICITY DIAGRAM WITH BOXES FOR THE COLOURS OF PAVEMENT MARKERS ASTM D 4280–08



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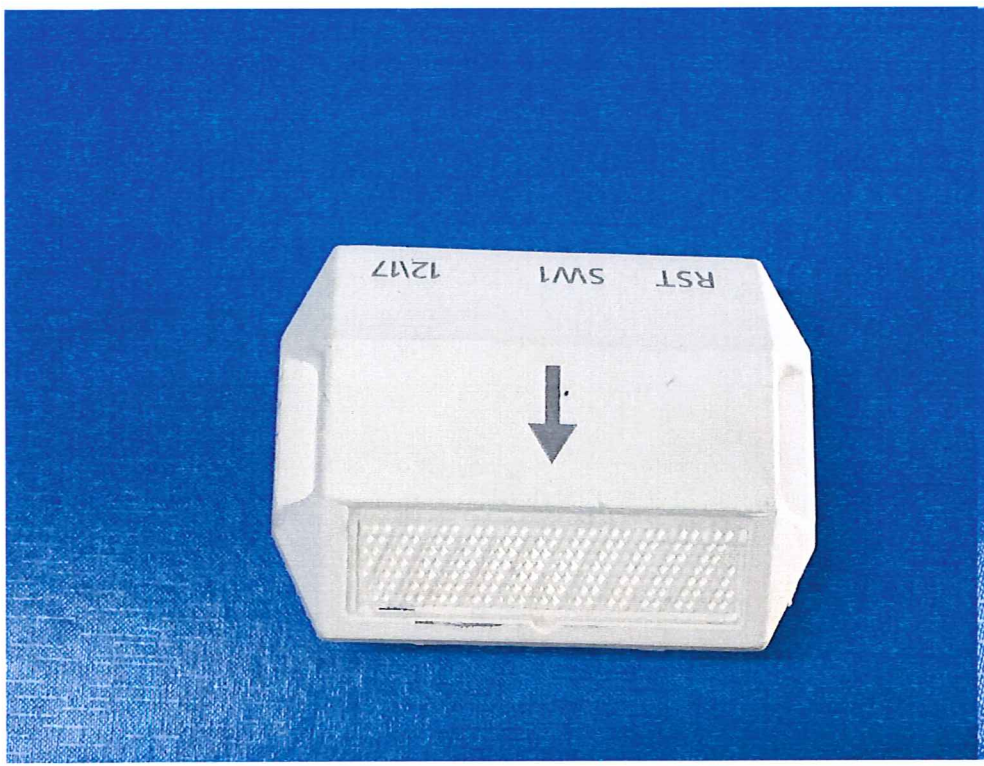
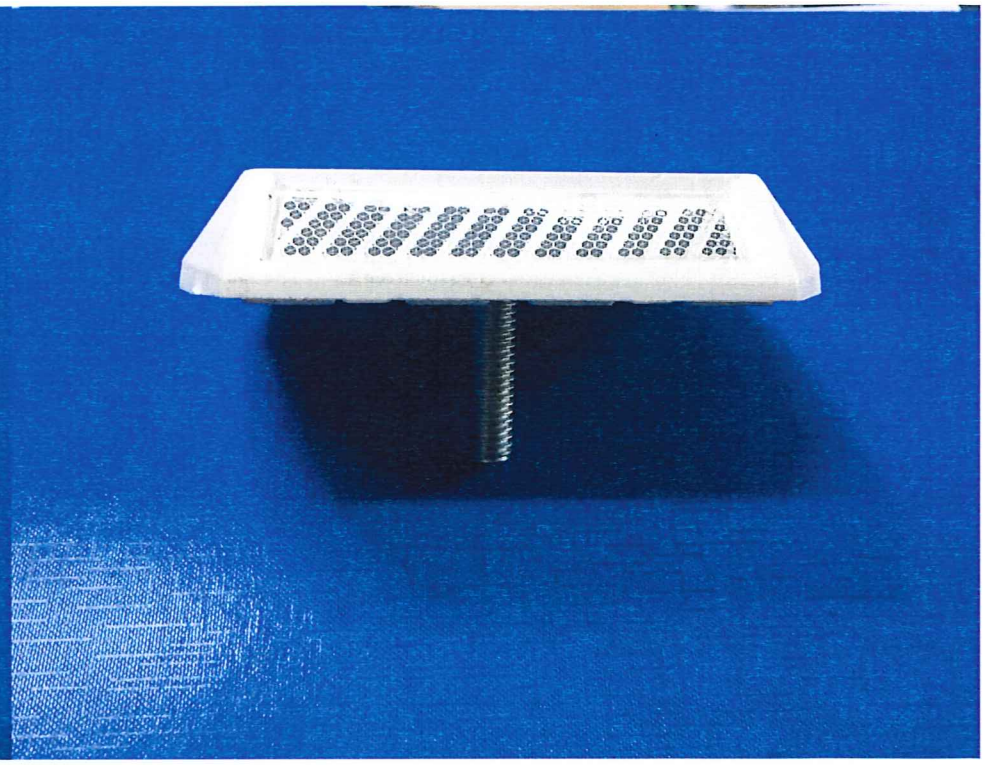
№	Name of testing / characteristic	Unit of measure	Standardized methods	Diary sample №	Test results										Test conditions	Test method deviation
1	2	3	4	5	6										7	8
2.	**Longitudinal Flexural Strength** test was performed assuming that the markers are placed in the roadway direction	N	ASTM D 4280-08 clause 9.2.1	0146-0	**1**	**2**	**3**	**average**							In accordance with the standard	no
					11040	12620	13670	**12443**								
3.	**Compressive Strength**	N	ASTM D 4280-08 clause 9.2.2	0146-0	**1**	**2**	**3**	**average**							In accordance with the standard	no
					58800	56800	61300	**58967**								
4.	**Resistance to Lens Cracking**															
4.1	**Lens Impact Strength**	have cracks / no cracks	ASTM D 4280-08 clause 9.4	0146-0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	In accordance with the standard	no
					no	no	no	no	no	no	no	no	no	no		
4.2	**Resistance to Temperature Cycling**				**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		
					no	no	no	no	no	no	no	no	no	no		
5.	**Dimensions**															
5.1	**Height**	mm	EN 1463-1	0146-0	1	2	3	4	5	6	7	8	9	10	**average**	In accordance with the standard	no
					20	**20**	**20**	**21**	**20**	**21**	**21**	**20**	**20**	**20**	**20**	
5.2	**Length**				1	2	3	4	5	6	7	8	9	10	**average**	
					114	**114**	**114**	**115**	**114**	**115**	**115**	**113**	**114**	**114**	**114**	
5.3	**Width**				1	2	3	4	5	6	7	8	9	10	**average**	
					84	**84**	**84**	**83**	**84**	**84**	**85**	**84**	**85**	**84**	**84**	
5.4	**A length of screw**				1	2	3	4	5	6	7	8	9	10	**average**	
					32	**33**	**32**	**34**	**33**	**33**	**34**	**33**	**32**	**32**	**33**	

Note I: The test results apply to the samples only.
Note II: The test certificate shut be entirely copied only and with agreement by the test laboratory





Tested by:.....
(A. Laskov)

Laboratory manager:.....
(eng. H. Angelova)

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CONSTRUCTION PRODUCTS LABORATORY
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