

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P231683

Luminaire Tested: **S123-DR-2-27-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231683  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29683)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-DR-2-27-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

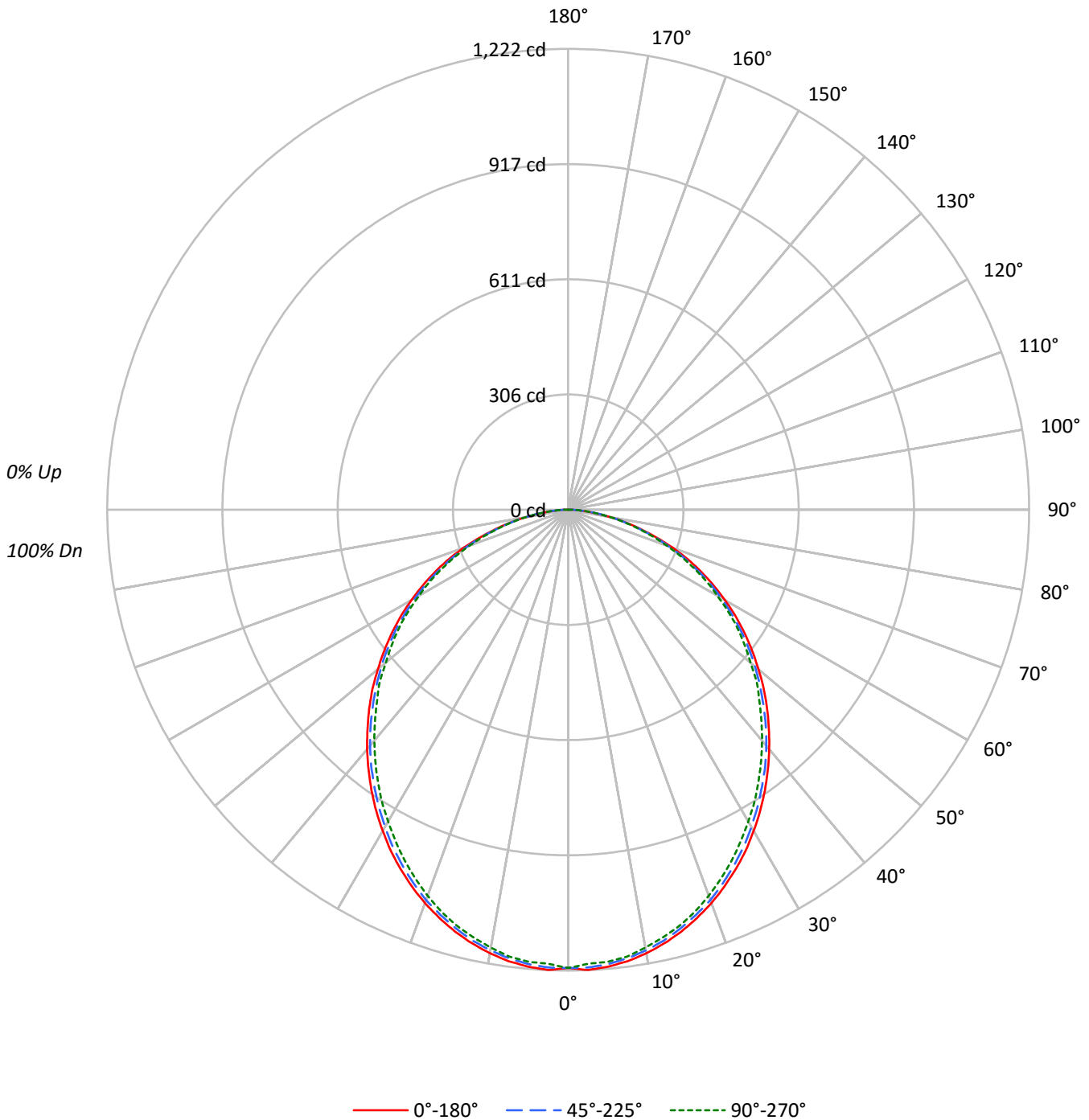
Lumens per Lamp: N/A  
Luminaire Lumens: 3170.9 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.22' x L: 3.92' x H: 0')  
CIE Type: Direct

Input Watts (W): 42.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14955	14955	14955
5°	15025	14945	14863
10°	14925	14830	14734
15°	14758	14646	14548
20°	14539	14425	14267
25°	14273	14124	13931
30°	13974	13802	13569
35°	13656	13459	13212
40°	13319	13126	12845
45°	12982	12735	12469
50°	12606	12376	12083
55°	12250	11992	11758
60°	11817	11522	11227
65°	11308	10955	10734
70°	10586	10234	9996
75°	9468	9258	9049
80°	8058	8058	8058
85°	6482	6792	6792



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.5	3.6
10°-20°	323.3	10.2
20°-30°	477.3	15.1
30°-40°	558.3	17.6
40°-50°	563.3	17.8
50°-60°	498.4	15.7
60°-70°	373.0	11.8
70°-80°	207.1	6.5
80°-90°	55.7	1.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	915.1	28.9
0°-40°	1473.4	46.5
0°-60°	2535.1	80.0
0°-90°	3170.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3170.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1216	1204	1210	1205	1203	115
15°	1158	1145	1150	1145	1142	326
25°	1051	1038	1040	1029	1026	484
35°	909	897	896	883	879	568
45°	746	736	732	720	716	575
55°	571	566	559	548	548	510
65°	388	383	376	371	369	384
75°	199	197	195	191	190	212
85°	46	48	48	47	48	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1215.1	1215.1	1215.1	1215.1	1215.1
2.5°	1221.7	1208.6	1215.1	1211.8	1205.3
5°	1216.2	1204.2	1209.7	1205.3	1203.1
7.5°	1207.5	1194.3	1199.8	1195.4	1195.4
10°	1194.3	1181.2	1186.7	1181.2	1179.0
12.5°	1177.9	1164.8	1170.3	1163.7	1161.5
15°	1158.3	1145.1	1149.5	1145.1	1141.8
17.5°	1135.3	1123.3	1126.5	1121.1	1117.8
20°	1110.1	1097.0	1101.4	1092.6	1089.3
22.5°	1081.7	1068.6	1071.8	1060.9	1058.7
25°	1051.1	1037.9	1040.1	1029.2	1025.9
27.5°	1019.3	1005.1	1007.3	995.3	990.9
30°	983.3	970.1	971.2	959.2	954.8
32.5°	947.2	934.0	934.0	920.9	918.7
35°	908.9	896.9	895.8	882.6	879.4
37.5°	869.5	858.6	857.5	843.3	840.0
40°	829.0	819.2	817.0	802.8	799.5
42.5°	787.5	777.6	775.4	761.2	757.9
45°	745.9	736.1	731.7	719.7	716.4
47.5°	703.3	695.6	689.0	678.1	678.1
50°	658.4	651.9	646.4	635.5	631.1
52.5°	614.7	609.2	602.6	592.8	589.5
55°	570.9	565.5	558.9	548.0	548.0
57.5°	526.1	519.5	513.0	505.3	503.1
60°	480.1	474.7	468.1	460.5	456.1
62.5°	434.2	429.8	423.3	416.7	414.5
65°	388.3	382.8	376.2	370.8	368.6
67.5°	342.3	335.8	330.3	324.8	323.7
70°	294.2	288.7	284.4	277.8	277.8
72.5°	245.0	240.6	238.4	235.2	234.1
75°	199.1	196.9	194.7	191.4	190.3
77.5°	155.3	155.3	153.1	152.0	152.0
80°	113.7	115.9	113.7	113.7	113.7
82.5°	76.6	77.7	78.7	78.7	77.7
85°	45.9	48.1	48.1	47.0	48.1
87.5°	21.9	21.9	21.9	21.9	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)