

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: P231680

Luminaire Tested: **S123-DR-1-30-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231680  
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-1-30-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2787.7 lumens  
Efficiency: N/A  
Efficacy: 99.9 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

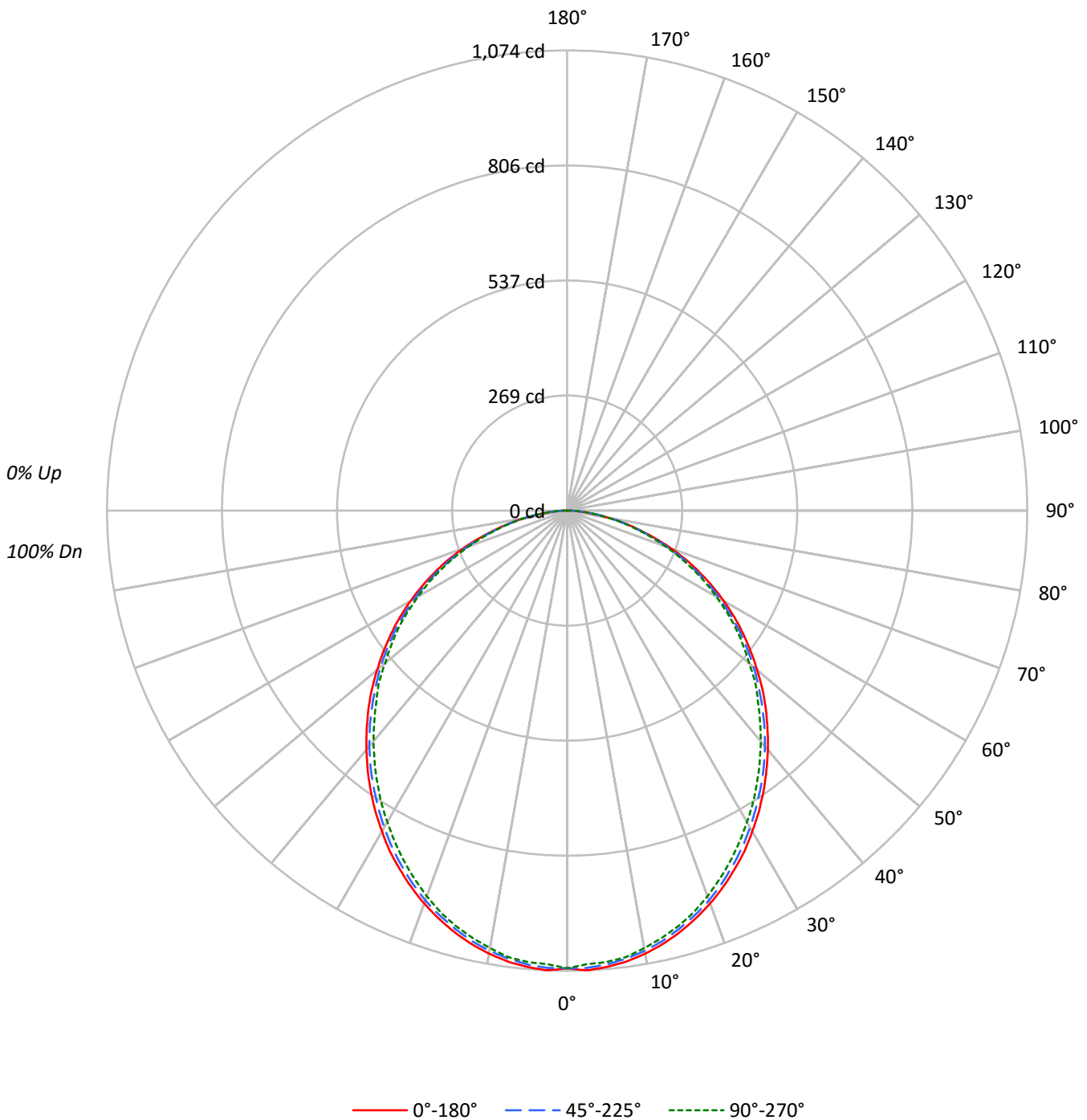
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13148	13148	13148
5°	13209	13139	13067
10°	13122	13038	12953
15°	12975	12876	12790
20°	12783	12682	12543
25°	12548	12417	12247
30°	12284	12134	11929
35°	12004	11832	11615
40°	11709	11540	11293
45°	11414	11197	10962
50°	11082	10881	10623
55°	10769	10542	10336
60°	10390	10129	9870
65°	9939	9633	9435
70°	9309	8996	8787
75°	8322	8141	7955
80°	7087	7087	7087
85°	5705	5973	5973



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.7	3.6
10°-20°	284.2	10.2
20°-30°	419.6	15.1
30°-40°	490.8	17.6
40°-50°	495.3	17.8
50°-60°	438.2	15.7
60°-70°	327.9	11.8
70°-80°	182.1	6.5
80°-90°	48.9	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°	804.5	28.9
0°-40°	1295.3	46.5
0°-60°	2228.7	80.0
0°-90°	2787.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1069	1059	1064	1060	1058	101
15°	1018	1007	1011	1007	1004	287
25°	924	912	914	905	902	426
35°	799	788	788	776	773	500
45°	656	647	643	633	630	506
55°	502	497	491	482	482	448
65°	341	336	331	326	324	338
75°	175	173	171	168	167	186
85°	40	42	42	41	42	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1068.3	1068.3	1068.3	1068.3	1068.3
2.5°	1074.0	1062.5	1068.3	1065.4	1059.6
5°	1069.2	1058.7	1063.5	1059.6	1057.7
7.5°	1061.5	1050.0	1054.8	1051.0	1051.0
10°	1050.0	1038.5	1043.3	1038.5	1036.5
12.5°	1035.6	1024.0	1028.8	1023.1	1021.2
15°	1018.3	1006.7	1010.6	1006.7	1003.8
17.5°	998.1	987.5	990.4	985.6	982.7
20°	976.0	964.4	968.3	960.6	957.7
22.5°	951.0	939.4	942.3	932.7	930.8
25°	924.0	912.5	914.4	904.8	901.9
27.5°	896.2	883.7	885.6	875.0	871.2
30°	864.4	852.9	853.8	843.3	839.4
32.5°	832.7	821.2	821.2	809.6	807.7
35°	799.0	788.5	787.5	776.0	773.1
37.5°	764.4	754.8	753.8	741.3	738.5
40°	728.8	720.2	718.3	705.8	702.9
42.5°	692.3	683.7	681.7	669.2	666.3
45°	655.8	647.1	643.3	632.7	629.8
47.5°	618.3	611.5	605.8	596.2	596.2
50°	578.8	573.1	568.3	558.7	554.8
52.5°	540.4	535.6	529.8	521.2	518.3
55°	501.9	497.1	491.3	481.7	481.7
57.5°	462.5	456.7	451.0	444.2	442.3
60°	422.1	417.3	411.5	404.8	401.0
62.5°	381.7	377.9	372.1	366.3	364.4
65°	341.3	336.5	330.8	326.0	324.0
67.5°	301.0	295.2	290.4	285.6	284.6
70°	258.7	253.8	250.0	244.2	244.2
72.5°	215.4	211.5	209.6	206.7	205.8
75°	175.0	173.1	171.2	168.3	167.3
77.5°	136.5	136.5	134.6	133.7	133.7
80°	100.0	101.9	100.0	100.0	100.0
82.5°	67.3	68.3	69.2	69.2	68.3
85°	40.4	42.3	42.3	41.3	42.3
87.5°	19.2	19.2	19.2	19.2	19.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)