

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: P231740

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231740  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33914)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-RDR-1-30-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR REGRESSED 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: 2457.9 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.07 / 1.23  
Luminous Opening: Rectangular (W 0.22' x L: 3.92' x H: 0')  
CIE Type: Direct

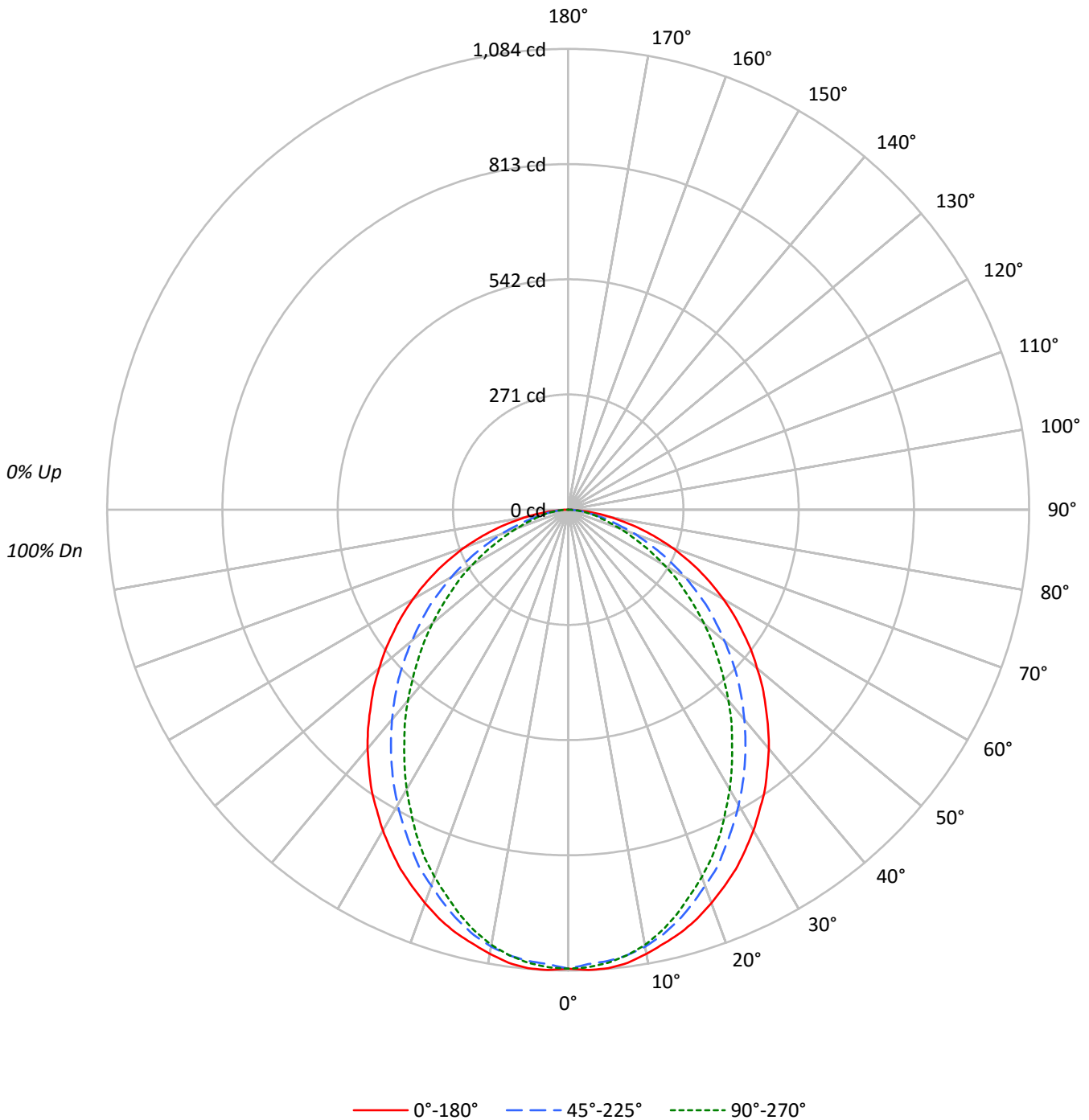
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62					62			
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33					33			
9	59	46	38	33	57	45	38	32	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	28					28			

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

	0°	45°	90°
0°	13286	13286	13286
5°	13376	13167	13219
10°	13253	13042	12990
15°	13108	12745	12557
20°	12894	12326	12036
25°	12666	11877	11461
30°	12384	11393	10793
35°	12108	10887	10093
40°	11794	10351	9418
45°	11435	9818	8696
50°	11103	9181	7988
55°	10744	8589	7207
60°	10375	7825	6422
65°	9904	6951	5507
70°	9313	6006	4638
75°	8440	4822	3866
80°	7265	3891	3593
85°	5663	3276	3135



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.7	4.1
10°-20°	283.1	11.5
20°-30°	406.7	16.5
30°-40°	457.8	18.6
40°-50°	440.2	17.9
50°-60°	365.0	14.8
60°-70°	249.0	10.1
70°-80°	123.7	5.0
80°-90°	30.7	1.2
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°	791.5	32.2
0°-40°	1249.3	50.8
0°-60°	2054.5	83.6
0°-90°	2457.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2457.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1083	1078	1066	1073	1070	103
15°	1029	1019	1000	997	986	290
25°	933	917	875	857	844	429
35°	806	775	725	690	672	503
45°	657	622	564	518	500	508
55°	501	462	400	353	336	449
65°	340	298	239	202	189	337
75°	178	143	101	84	81	188
85°	40	26	23	23	22	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1079.5	1079.5	1079.5	1079.5	1079.5
2.5°	1083.7	1079.5	1070.0	1079.5	1077.4
5°	1082.7	1078.5	1065.8	1073.2	1070.0
7.5°	1075.3	1070.0	1057.3	1061.6	1057.3
10°	1060.5	1057.3	1043.6	1045.7	1039.4
12.5°	1044.7	1039.4	1024.6	1024.6	1015.1
15°	1028.8	1019.3	1000.3	997.1	985.5
17.5°	1008.7	1002.4	971.8	966.5	951.7
20°	984.5	972.8	941.1	931.6	919.0
22.5°	959.1	945.4	912.6	896.8	884.1
25°	932.7	916.8	874.6	856.6	844.0
27.5°	902.1	884.1	838.7	817.6	800.7
30°	871.4	849.2	801.7	776.4	759.5
32.5°	837.6	814.4	763.7	732.0	716.2
35°	805.9	775.3	724.6	689.7	671.8
37.5°	769.0	738.3	684.5	645.4	630.6
40°	734.1	701.4	644.3	603.1	586.2
42.5°	696.1	661.2	604.2	560.9	541.9
45°	657.0	622.1	564.1	517.6	499.6
47.5°	620.0	583.1	521.8	476.4	459.5
50°	579.9	544.0	479.5	434.1	417.2
52.5°	541.9	501.7	438.4	392.9	376.0
55°	500.7	461.6	400.3	352.8	335.9
57.5°	462.6	421.5	357.0	312.7	301.0
60°	421.5	379.2	317.9	275.7	260.9
62.5°	381.3	337.0	276.7	237.7	225.0
65°	340.1	297.9	238.7	201.7	189.1
67.5°	300.0	258.8	199.6	169.0	157.4
70°	258.8	218.6	166.9	137.3	128.9
72.5°	217.6	180.6	132.0	108.8	102.5
75°	177.5	142.6	101.4	84.5	81.3
77.5°	137.3	108.8	75.0	66.5	65.5
80°	102.5	75.0	54.9	50.7	50.7
82.5°	68.7	46.5	38.0	37.0	35.9
85°	40.1	26.4	23.2	23.2	22.2
87.5°	16.9	10.6	10.6	10.6	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)