

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: P242940

Luminaire Tested: **S121DR-H685D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242940  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-47)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-H685D927-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2024.7 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

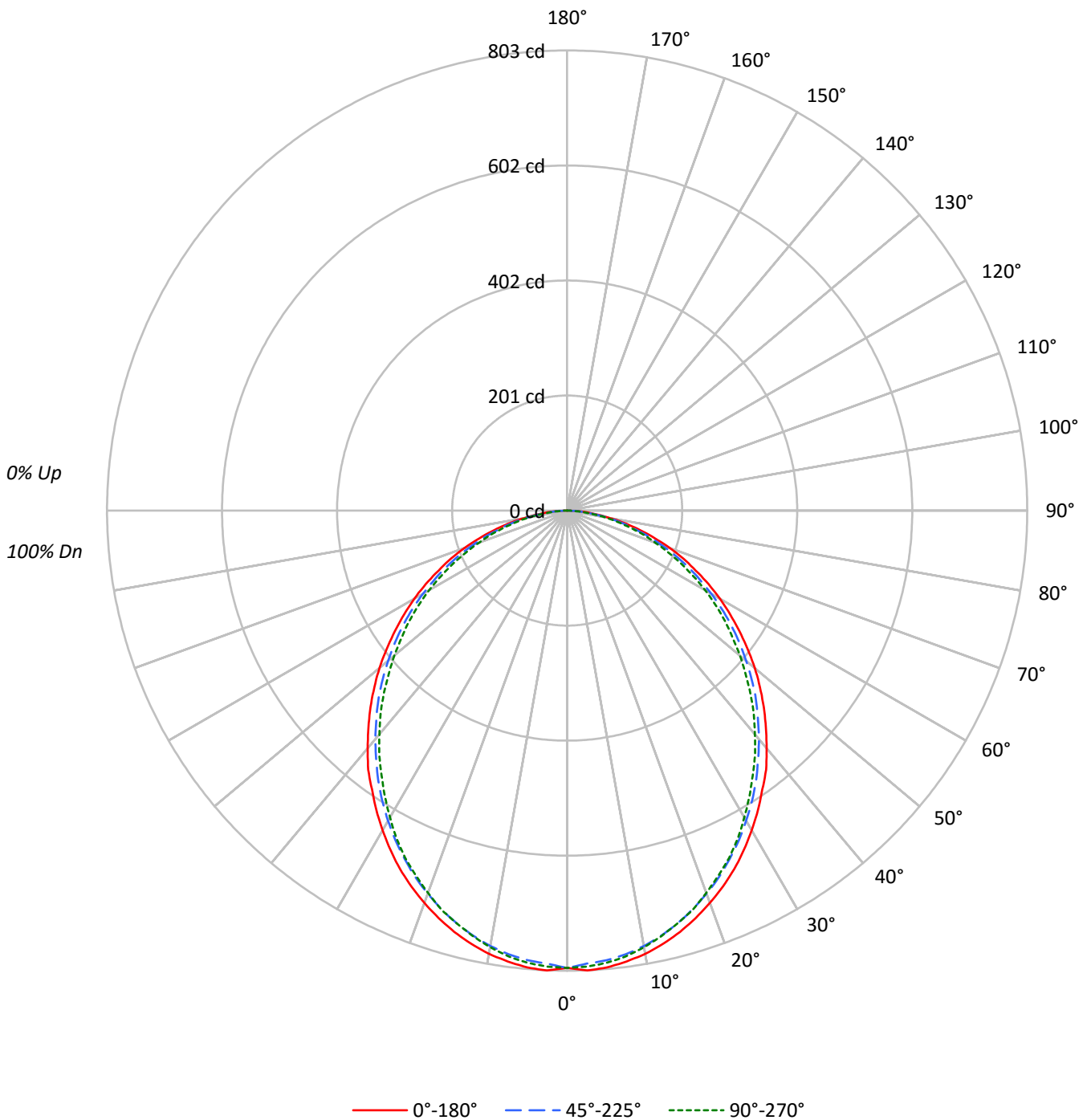
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60					60			
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52					52			
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31					31			
9	57	44	36	31	56	44	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26					26			

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

	0°	45°	90°
0°	23647	23647	23647
5°	23803	23428	23562
10°	23633	23212	23278
15°	23347	22871	22871
20°	22974	22434	22390
25°	22561	21934	21858
30°	22040	21383	21154
35°	21482	20788	20415
40°	20941	20140	19711
45°	20331	19527	18969
50°	19706	18784	18139
55°	18953	18075	17383
60°	18276	17227	16480
65°	17373	16280	15403
70°	16469	15126	14164
75°	15077	13715	12868
80°	13121	12115	11227
85°	11321	9315	7785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.2	3.7
10°-20°	211.6	10.5
20°-30°	311.1	15.4
30°-40°	361.0	17.8
40°-50°	360.1	17.8
50°-60°	313.5	15.5
60°-70°	230.7	11.4
70°-80°	128.5	6.3
80°-90°	33.0	1.6
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°	597.9	29.5
0°-40°	958.9	47.4
0°-60°	1632.4	80.6
0°-90°	2024.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2024.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	800	796	788	794	792	76
15°	761	757	746	748	746	214
25°	690	682	671	671	669	318
35°	594	586	575	568	564	372
45°	485	477	466	456	453	374
55°	367	360	350	340	336	329
65°	248	243	232	223	220	246
75°	132	126	120	115	112	140
85°	33	31	27	24	23	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	798.1	798.1	798.1	798.1	798.1
2.5°	803.3	798.8	791.4	798.1	796.6
5°	800.3	795.9	787.7	793.6	792.2
7.5°	793.6	789.9	781.1	786.2	784.8
10°	785.5	781.1	771.5	775.9	773.7
12.5°	774.4	770.7	759.6	763.3	760.4
15°	761.1	756.7	745.6	748.5	745.6
17.5°	745.6	741.1	729.3	731.5	730.0
20°	728.6	722.6	711.5	713.0	710.1
22.5°	710.1	703.4	692.3	692.3	689.4
25°	690.1	682.0	670.9	670.9	668.6
27.5°	667.9	660.5	648.7	647.2	645.0
30°	644.2	636.8	625.0	622.0	618.3
32.5°	619.8	611.7	600.6	595.4	591.7
35°	593.9	586.5	574.7	568.0	564.4
37.5°	570.3	559.9	547.3	541.4	538.5
40°	541.4	532.5	520.7	512.6	509.6
42.5°	513.3	505.2	492.6	484.5	482.2
45°	485.2	477.1	466.0	456.4	452.7
47.5°	456.4	448.2	437.1	427.5	422.3
50°	427.5	419.4	407.5	397.9	393.5
52.5°	397.2	391.3	378.7	369.8	363.9
55°	366.9	360.2	349.9	340.2	336.5
57.5°	337.3	331.4	320.3	309.9	307.7
60°	308.4	302.5	290.7	281.8	278.1
62.5°	278.1	272.2	261.1	252.2	248.5
65°	247.8	242.6	232.2	222.6	219.7
67.5°	219.7	213.0	203.4	194.5	190.8
70°	190.1	182.7	174.6	167.2	163.5
72.5°	160.5	154.6	147.9	140.5	139.1
75°	131.7	125.7	119.8	114.6	112.4
77.5°	104.3	99.9	95.4	90.2	88.8
80°	76.9	74.0	71.0	67.3	65.8
82.5°	54.0	51.8	47.3	44.4	42.9
85°	33.3	31.1	27.4	23.7	22.9
87.5°	15.5	12.6	9.6	8.1	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)