

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: P242104

Luminaire Tested: **S121DR-S685D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242104  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-S685D935-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2368.1 lumens  
Efficiency: N/A  
Efficacy: 90.4 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

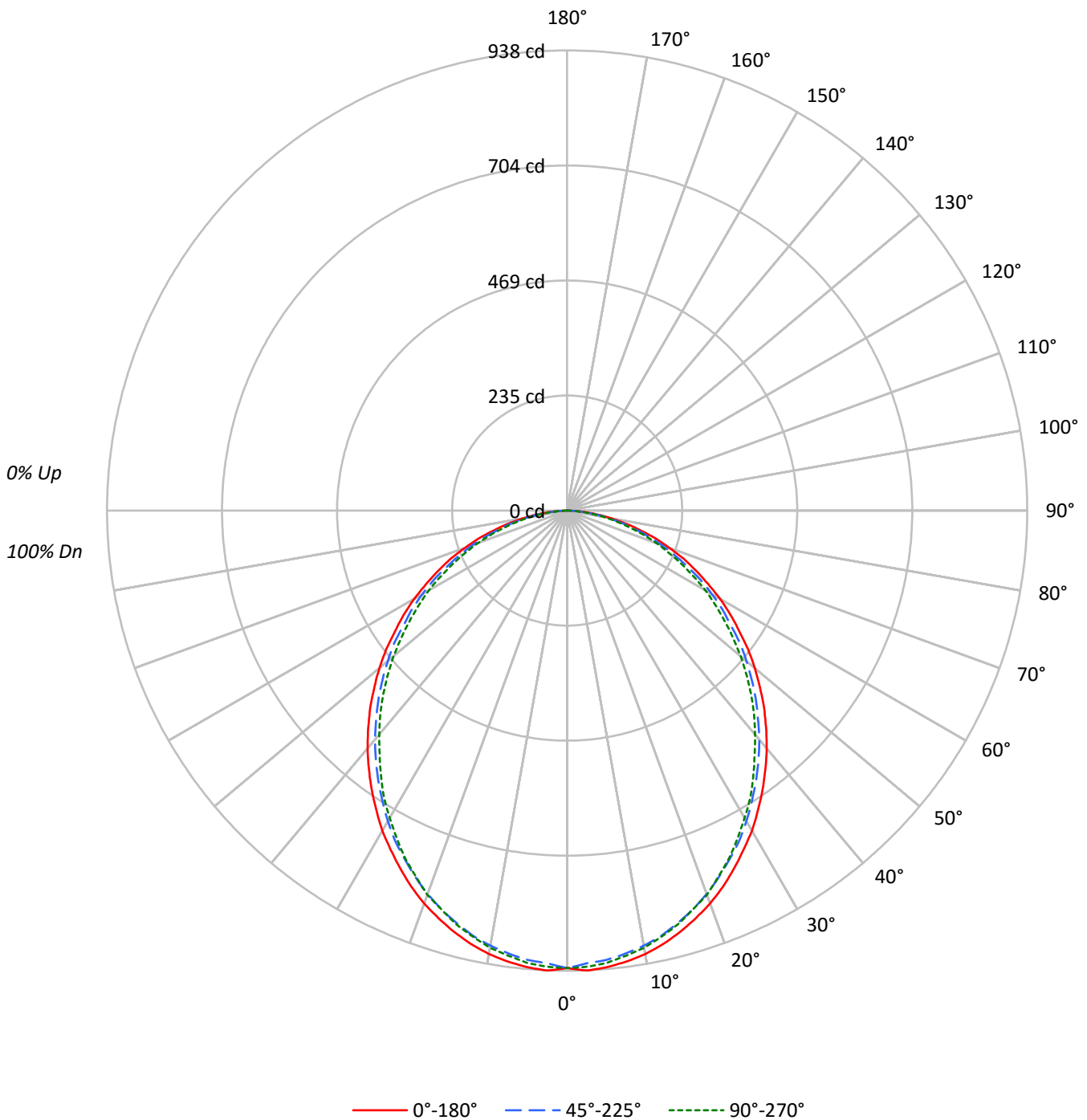
Input Watts (W): 26.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	27630	27630	27630
5°	27786	27349	27530
10°	27614	27096	27226
15°	27282	26703	26782
20°	26877	26225	26278
25°	26318	25615	25559
30°	25776	25010	24743
35°	25132	24293	23916
40°	24476	23579	23045
45°	23776	22803	22225
50°	23020	21988	21273
55°	22104	20994	20240
60°	21327	20207	19289
65°	20283	18958	17990
70°	19094	17681	16711
75°	17550	16062	14985
80°	15579	14111	13070
85°	12885	10539	9383



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.8	3.7
10°-20°	247.2	10.4
20°-30°	363.6	15.4
30°-40°	422.2	17.8
40°-50°	421.3	17.8
50°-60°	366.6	15.5
60°-70°	270.0	11.4
70°-80°	150.4	6.4
80°-90°	38.8	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°	698.7	29.5
0°-40°	1121.0	47.3
0°-60°	1908.8	80.6
0°-90°	2368.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2368.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	934	930	920	927	926	89
15°	889	882	870	876	873	251
25°	805	796	784	785	782	371
35°	695	686	672	665	661	434
45°	567	558	544	534	530	437
55°	428	423	406	399	392	384
65°	289	283	270	262	257	287
75°	153	149	140	134	131	163
85°	38	36	31	29	28	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	932.5	932.5	932.5	932.5	932.5
2.5°	938.5	933.3	923.9	931.6	930.7
5°	934.2	929.9	919.5	927.3	925.6
7.5°	927.3	922.1	910.9	917.8	915.2
10°	917.8	912.7	900.6	905.8	904.9
12.5°	904.9	898.9	887.7	892.0	889.4
15°	889.4	882.5	870.5	876.5	873.1
17.5°	871.3	863.6	852.4	855.8	852.4
20°	852.4	843.8	831.7	835.2	833.4
22.5°	830.0	822.3	808.5	810.2	806.8
25°	805.0	796.4	783.5	785.2	781.8
27.5°	779.2	771.5	759.4	756.8	752.5
30°	753.4	743.9	731.0	727.5	723.2
32.5°	724.1	715.5	700.9	697.4	694.8
35°	694.8	686.2	671.6	664.7	661.2
37.5°	663.8	655.2	640.6	632.8	627.7
40°	632.8	623.4	609.6	601.8	595.8
42.5°	600.1	591.5	576.0	568.3	564.0
45°	567.4	557.9	544.2	533.8	530.4
47.5°	533.0	524.3	510.6	499.4	495.9
50°	499.4	489.9	477.0	465.8	461.5
52.5°	464.9	456.3	444.3	433.1	426.2
55°	427.9	422.8	406.4	398.6	391.8
57.5°	394.3	388.3	375.4	362.5	358.2
60°	359.9	353.0	341.0	329.8	325.5
62.5°	323.7	318.6	306.5	296.2	290.2
65°	289.3	283.3	270.4	261.7	256.6
67.5°	257.4	249.7	236.8	228.2	223.9
70°	220.4	214.4	204.1	197.2	192.9
72.5°	188.6	181.7	172.2	165.3	161.0
75°	153.3	149.0	140.3	134.3	130.9
77.5°	122.3	116.2	110.2	105.9	103.3
80°	91.3	87.0	82.7	78.4	76.6
82.5°	63.7	60.3	56.0	53.4	50.8
85°	37.9	36.2	31.0	29.3	27.6
87.5°	18.1	15.5	10.3	9.5	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)