

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: P242861

Luminaire Tested: **S125DR-S850D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242861  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-S850D935-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2720.6 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
CIE Type: Direct

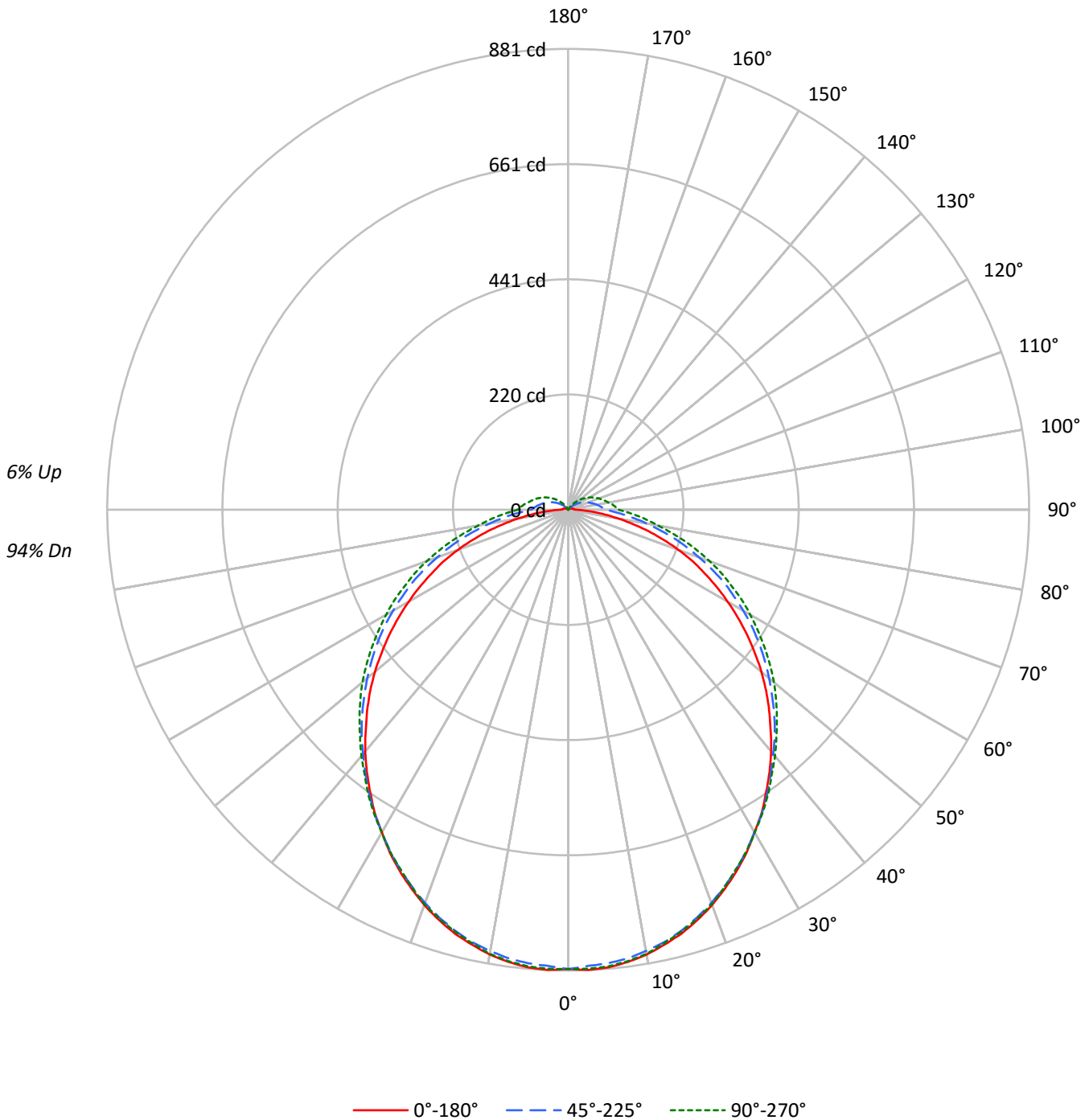
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	106	101	96	92	103	98	94	90	93	89	86	88	85	82	83	81	79	76
2	96	88	80	74	93	85	78	73	81	75	70	76	72	68	72	69	65	63
3	88	77	68	61	84	75	67	60	71	64	59	67	61	57	64	59	55	53
4	80	68	59	52	77	66	58	51	63	55	50	60	53	48	57	51	47	45
5	74	60	51	44	71	59	50	44	56	49	43	53	47	42	51	45	41	39
6	68	54	45	39	66	53	45	38	51	43	38	48	42	37	46	40	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	37	33	42	36	32	30
8	59	45	36	30	57	44	36	30	42	35	30	40	34	29	39	33	29	27
9	55	41	33	27	53	40	33	27	39	32	27	37	31	26	36	30	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	28	24	33	28	23	22

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

	0°	45°	90°
0°	6242	6242	6242
5°	6254	6122	6139
10°	6209	6007	5995
15°	6135	5871	5813
20°	6035	5705	5633
25°	5916	5527	5410
30°	5772	5332	5209
35°	5637	5154	5025
40°	5501	4964	4838
45°	5346	4803	4673
50°	5198	4626	4525
55°	5020	4459	4351
60°	4825	4268	4174
65°	4623	4068	3975
70°	4393	3796	3769
75°	4027	3534	3516
80°	3550	3213	3239
85°	3103	2981	3125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.1	3.1
10°-20°	235.9	8.7
20°-30°	350.8	12.9
30°-40°	415.5	15.3
40°-50°	429.5	15.8
50°-60°	395.7	14.5
60°-70°	319.9	11.8
70°-80°	214.0	7.9
80°-90°	110.6	4.1
90°-100°	62.3	2.3
100°-110°	45.9	1.7
110°-120°	30.7	1.1
120°-130°	17.4	0.6
130°-140°	7.6	0.3
140°-150°	1.5	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	669.8	24.6
0°-40°	1085.3	39.9
0°-60°	1910.5	70.2
0°-90°	2555.1	93.9
90°-120°	139.0	5.1
90°-150°	165.5	6.1
90°-180°	166.0	6.1
0°-180°	2720.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	878	878	878	878	878	
5°	878	876	870	877	876	83
15°	839	840	833	839	835	236
25°	762	765	759	763	758	351
35°	660	666	663	666	666	413
45°	543	553	557	563	564	419
55°	418	431	445	455	458	373
65°	288	307	328	341	344	285
75°	158	181	208	226	230	168
85°	47	76	106	125	132	49
90°	14	41	71	90	96	10
95°	11	34	63	82	88	9
105°	8	22	47	65	71	8
115°	5	11	34	49	54	5
125°	3	3	20	34	38	3
135°	2	1	7	18	22	1
145°	1	0	0	4	8	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	878.2	878.2	878.2	878.2	878.2
2.5°	880.8	879.1	873.1	879.1	878.2
5°	878.2	876.5	870.5	877.4	876.5
7.5°	872.2	871.3	865.3	871.3	870.5
10°	863.6	863.6	856.7	862.7	861.9
12.5°	851.5	852.4	847.2	851.5	848.9
15°	838.6	839.5	833.4	838.6	835.2
17.5°	822.3	824.0	817.9	822.3	819.7
20°	804.2	805.9	799.9	802.5	802.5
22.5°	783.5	787.0	780.1	783.5	780.9
25°	762.0	764.6	759.4	762.8	758.5
27.5°	738.7	742.2	736.2	738.7	737.0
30°	712.0	717.2	712.0	713.8	712.9
32.5°	687.9	692.2	688.8	690.5	689.7
35°	659.5	665.6	663.0	665.6	665.6
37.5°	632.0	637.1	636.3	639.7	638.9
40°	603.6	610.4	609.6	613.0	614.8
42.5°	572.6	582.0	584.6	588.9	588.9
45°	543.3	552.8	557.1	563.1	564.0
47.5°	513.2	521.8	528.7	537.3	539.0
50°	482.2	491.6	501.1	510.6	513.2
52.5°	449.4	461.5	473.5	483.9	485.6
55°	417.6	431.4	445.1	454.6	458.1
57.5°	384.9	401.2	416.7	427.1	429.6
60°	352.1	369.4	386.6	399.5	402.1
62.5°	320.3	337.5	356.5	371.1	374.5
65°	287.6	307.4	328.0	341.0	344.4
67.5°	257.4	276.4	297.0	312.5	316.8
70°	223.9	243.7	266.0	282.4	287.6
72.5°	191.1	211.8	236.8	254.9	258.3
75°	158.4	180.8	208.4	225.6	229.9
77.5°	126.6	152.4	178.2	197.2	200.6
80°	97.3	123.1	152.4	171.3	174.8
82.5°	70.6	98.2	128.3	146.4	153.3
85°	47.4	75.8	105.9	124.8	131.7
87.5°	30.1	57.7	87.0	106.8	112.8
90°	13.8	41.3	70.6	90.4	96.4
92.5°	12.1	37.0	67.2	86.1	92.1
95°	11.2	33.6	62.9	81.8	87.8
97.5°	10.3	31.0	59.4	77.5	83.5
100°	9.5	27.6	55.1	73.2	78.4
102.5°	8.6	25.0	51.7	68.9	74.0
105°	7.7	21.5	47.4	64.6	70.6
107.5°	6.9	18.9	43.9	61.1	66.3
110°	6.0	16.4	40.5	56.8	62.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.0	13.8	37.0	52.5	58.5
115°	5.2	11.2	33.6	49.1	54.2
117.5°	4.3	8.6	30.1	44.8	50.8
120°	4.3	6.9	26.7	41.3	46.5
122.5°	3.4	4.3	23.2	37.0	42.2
125°	3.4	2.6	19.8	33.6	37.9
127.5°	2.6	1.7	16.4	29.3	34.4
130°	2.6	1.7	13.8	25.8	30.1
132.5°	1.7	1.7	10.3	22.4	25.8
135°	1.7	0.9	6.9	18.1	22.4
137.5°	1.7	0.9	4.3	14.6	18.1
140°	0.9	0.9	1.7	11.2	14.6
142.5°	0.9	0.0	0.0	7.7	11.2
145°	0.9	0.0	0.0	4.3	7.7
147.5°	0.0	0.0	0.0	1.7	3.4
150°	0.0	0.0	0.0	0.0	0.9
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)