

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: P243711

Luminaire Tested: **S125DR-H850D840-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243711  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-56)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DR-H850D840-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3167.7 lumens  
Efficiency: N/A  
Efficacy: 134.2 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

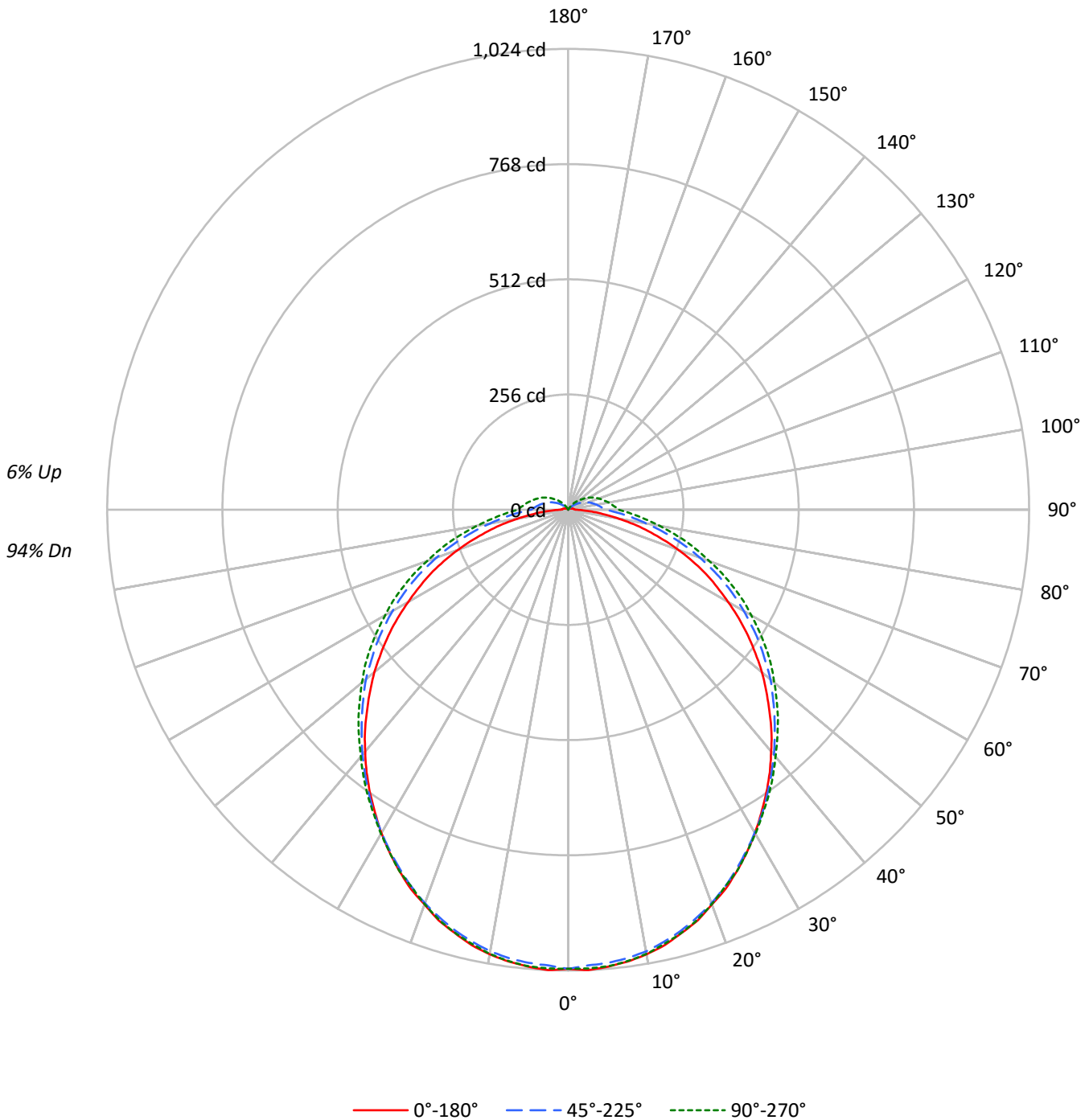
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	7251	7251	7251
5°	7259	7108	7132
10°	7213	6988	6971
15°	7126	6821	6773
20°	7006	6638	6545
25°	6881	6424	6322
30°	6726	6207	6077
35°	6560	5995	5858
40°	6393	5789	5640
45°	6216	5584	5461
50°	6059	5414	5271
55°	5861	5204	5096
60°	5621	4976	4875
65°	5427	4737	4658
70°	5105	4442	4374
75°	4675	4093	4124
80°	4162	3717	3809
85°	3705	3476	3623



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	3.0
10°-20°	274.3	8.7
20°-30°	408.3	12.9
30°-40°	483.7	15.3
40°-50°	500.5	15.8
50°-60°	461.6	14.6
60°-70°	373.0	11.8
70°-80°	249.3	7.9
80°-90°	128.6	4.1
90°-100°	72.1	2.3
100°-110°	53.5	1.7
110°-120°	35.6	1.1
120°-130°	19.9	0.6
130°-140°	8.9	0.3
140°-150°	1.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	779.1	24.6
0°-40°	1262.8	39.9
0°-60°	2224.8	70.2
0°-90°	2975.7	93.9
90°-120°	161.2	5.1
90°-150°	192.0	6.1
90°-180°	192.0	6.1
0°-180°	3167.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1020	1020	1020	1020	1020	
5°	1019	1018	1011	1018	1018	97
15°	974	977	968	974	973	275
25°	886	890	882	887	886	408
35°	768	773	771	775	776	480
45°	632	642	648	658	659	488
55°	488	503	520	532	536	436
65°	338	357	382	399	404	333
75°	184	211	241	262	270	195
85°	57	89	124	145	153	58
90°	16	47	82	105	112	11
95°	13	40	73	94	101	10
105°	9	26	56	75	82	10
115°	7	13	39	57	63	6
125°	4	4	23	37	43	4
135°	2	2	8	22	26	2
145°	1	0	0	6	8	1
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°	1020.2	1020.2	1020.2	1020.2	1020.2
2.5°	1024.0	1021.2	1013.6	1021.2	1020.2
5°	1019.3	1018.3	1010.8	1018.3	1018.3
7.5°	1012.7	1011.7	1005.1	1012.7	1011.7
10°	1003.2	1003.2	996.6	1002.3	1002.3
12.5°	991.0	991.0	983.4	990.0	988.2
15°	974.0	976.8	968.3	974.0	973.1
17.5°	957.0	957.0	950.4	955.1	955.1
20°	933.5	937.2	930.6	935.3	932.5
22.5°	912.7	914.6	908.0	912.7	908.0
25°	886.3	890.1	882.5	887.3	886.3
27.5°	859.0	861.8	856.1	861.8	859.0
30°	829.7	832.6	828.8	832.6	831.6
32.5°	798.6	804.3	801.5	804.3	803.3
35°	767.5	773.2	771.3	775.1	776.0
37.5°	735.5	741.1	741.1	745.8	746.8
40°	701.5	709.1	710.9	717.5	716.6
42.5°	668.5	676.1	678.9	687.4	687.4
45°	631.7	642.1	647.8	658.1	659.1
47.5°	596.9	608.2	616.7	626.1	628.0
50°	562.0	572.3	586.5	595.9	597.8
52.5°	524.2	537.4	551.6	564.8	568.6
55°	487.5	502.6	519.5	531.8	536.5
57.5°	449.8	465.8	484.6	499.7	503.5
60°	410.2	429.0	450.7	465.8	469.6
62.5°	373.4	394.1	416.8	432.8	438.4
65°	337.6	357.4	381.9	398.8	403.6
67.5°	298.9	320.6	346.0	364.9	369.6
70°	260.2	283.8	311.2	329.1	333.8
72.5°	220.6	247.0	276.3	296.1	301.7
75°	183.9	211.2	241.4	262.1	269.7
77.5°	149.0	177.3	207.4	229.1	235.7
80°	114.1	143.3	176.3	199.0	205.6
82.5°	83.0	114.1	148.0	170.7	177.3
85°	56.6	88.6	123.5	145.2	152.7
87.5°	34.9	66.0	101.8	123.5	131.1
90°	16.0	47.1	82.0	104.7	112.2
92.5°	14.1	43.4	77.3	99.9	106.5
95°	13.2	39.6	72.6	94.3	100.9
97.5°	12.3	35.8	67.9	89.6	96.2
100°	11.3	32.1	64.1	84.9	91.5
102.5°	10.4	29.2	59.4	80.1	85.8
105°	9.4	25.5	55.6	75.4	82.0
107.5°	8.5	21.7	51.9	70.7	77.3
110°	7.5	18.9	47.1	66.0	72.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	16.0	43.4	61.3	67.9
115°	6.6	13.2	38.7	56.6	63.2
117.5°	5.7	10.4	33.9	51.9	58.5
120°	4.7	7.5	30.2	47.1	53.7
122.5°	4.7	5.7	26.4	42.4	49.0
125°	3.8	3.8	22.6	36.8	43.4
127.5°	3.8	2.8	18.9	33.0	37.7
130°	2.8	1.9	16.0	29.2	33.9
132.5°	2.8	1.9	12.3	25.5	30.2
135°	1.9	1.9	8.5	21.7	25.5
137.5°	1.9	0.9	5.7	17.0	21.7
140°	0.9	0.9	1.9	13.2	17.0
142.5°	0.9	0.9	0.9	9.4	13.2
145°	0.9	0.0	0.0	5.7	8.5
147.5°	0.9	0.0	0.0	1.9	4.7
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)