

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: P243703

Luminaire Tested: **S125DR-H1090D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243703  
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-H1090D830-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3812.8 lumens  
Efficiency: N/A  
Efficacy: 121.0 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

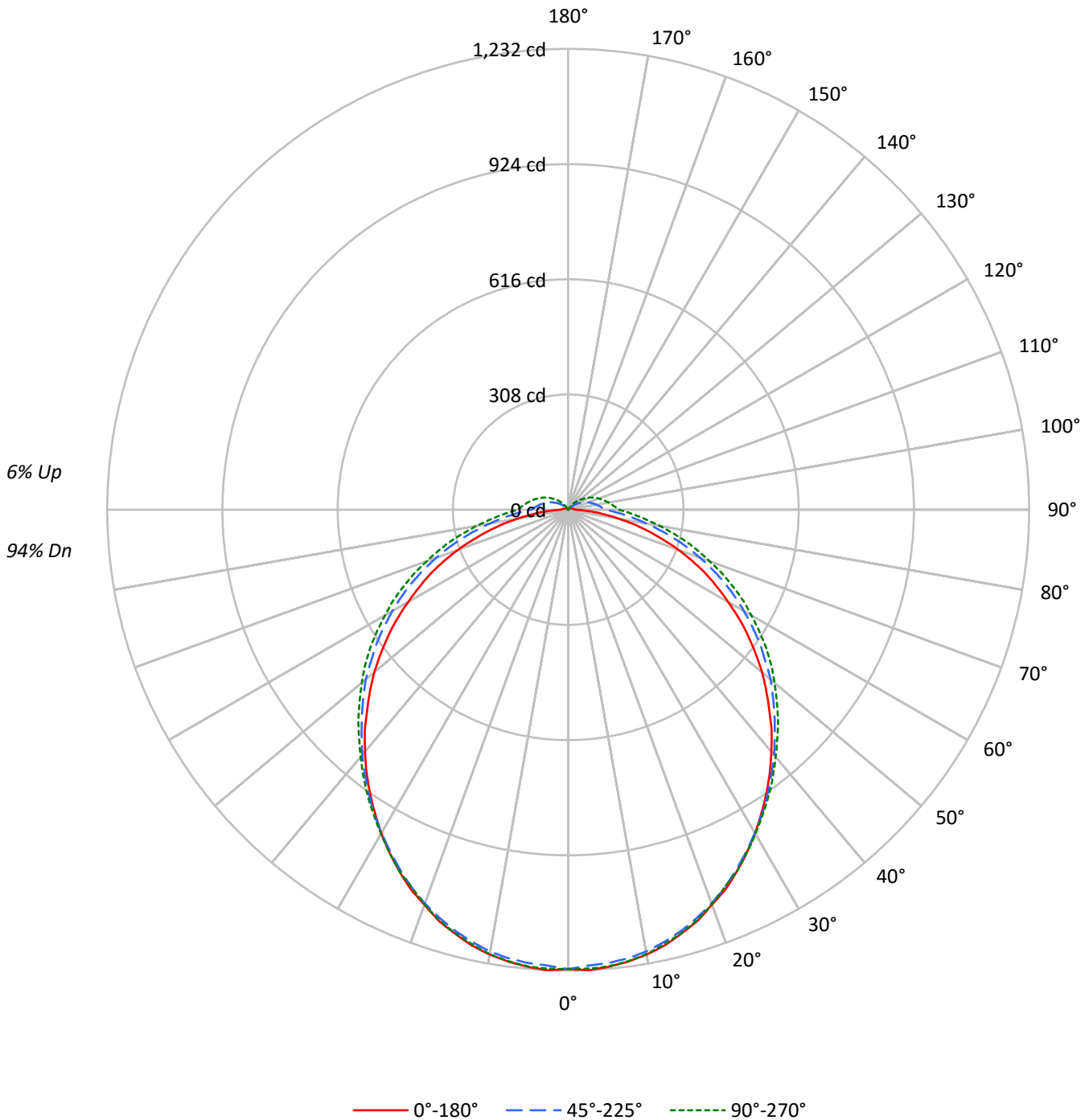
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	8728	8728	8728
5°	8736	8556	8585
10°	8682	8411	8391
15°	8577	8211	8152
20°	8432	7990	7878
25°	8283	7732	7609
30°	8096	7471	7315
35°	7896	7217	7051
40°	7695	6969	6788
45°	7482	6721	6572
50°	7292	6516	6344
55°	7055	6264	6134
60°	6766	5990	5867
65°	6532	5700	5605
70°	6145	5345	5265
75°	5626	4926	4964
80°	5009	4474	4584
85°	4458	4186	4363



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.2	3.0
10°-20°	330.1	8.7
20°-30°	491.4	12.9
30°-40°	582.2	15.3
40°-50°	602.4	15.8
50°-60°	555.6	14.6
60°-70°	449.0	11.8
70°-80°	300.0	7.9
80°-90°	154.8	4.1
90°-100°	86.8	2.3
100°-110°	64.4	1.7
110°-120°	42.9	1.1
120°-130°	24.0	0.6
130°-140°	10.8	0.3
140°-150°	2.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	937.8	24.6
0°-40°	1520.0	39.9
0°-60°	2677.9	70.2
0°-90°	3581.7	93.9
90°-120°	194.1	5.1
90°-150°	231.1	6.1
90°-180°	231.0	6.1
0°-180°	3812.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1227	1226	1217	1226	1226	116
15°	1172	1176	1166	1172	1171	331
25°	1067	1071	1062	1068	1067	491
35°	924	931	928	933	934	578
45°	760	773	780	792	793	588
55°	587	605	625	640	646	524
65°	406	430	460	480	486	401
75°	221	254	290	316	325	235
85°	68	107	149	175	184	70
90°	19	57	99	126	135	13
95°	16	48	87	114	121	13
105°	11	31	67	91	99	12
115°	8	16	46	68	76	7
125°	4	4	27	44	52	4
135°	2	2	10	26	31	2
145°	1	0	0	7	10	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°	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1232.5	1229.1	1220.0	1229.1	1228.0
5°	1226.8	1225.7	1216.6	1225.7	1225.7
7.5°	1218.9	1217.8	1209.8	1218.9	1217.8
10°	1207.5	1207.5	1199.6	1206.4	1206.4
12.5°	1192.8	1192.8	1183.7	1191.7	1189.4
15°	1172.4	1175.8	1165.6	1172.4	1171.2
17.5°	1151.9	1151.9	1144.0	1149.7	1149.7
20°	1123.6	1128.1	1120.2	1125.8	1122.4
22.5°	1098.6	1100.9	1092.9	1098.6	1092.9
25°	1066.8	1071.4	1062.3	1068.0	1066.8
27.5°	1033.9	1037.3	1030.5	1037.3	1033.9
30°	998.7	1002.1	997.6	1002.1	1001.0
32.5°	961.3	968.1	964.7	968.1	966.9
35°	923.8	930.6	928.4	932.9	934.0
37.5°	885.2	892.0	892.0	897.7	898.9
40°	844.4	853.5	855.7	863.7	862.5
42.5°	804.7	813.7	817.1	827.4	827.4
45°	760.4	772.9	779.7	792.2	793.3
47.5°	718.4	732.0	742.2	753.6	755.9
50°	676.4	688.9	705.9	717.3	719.5
52.5°	631.0	646.9	663.9	679.8	684.4
55°	586.8	604.9	625.3	640.1	645.8
57.5°	541.4	560.6	583.3	601.5	606.0
60°	493.7	516.4	542.5	560.6	565.2
62.5°	449.4	474.4	501.6	520.9	527.7
65°	406.3	430.1	459.6	480.1	485.7
67.5°	359.8	385.9	416.5	439.2	444.9
70°	313.2	341.6	374.5	396.1	401.8
72.5°	265.6	297.3	332.5	356.4	363.2
75°	221.3	254.2	290.5	315.5	324.6
77.5°	179.3	213.4	249.7	275.8	283.7
80°	137.3	172.5	212.2	239.5	247.4
82.5°	99.9	137.3	178.2	205.4	213.4
85°	68.1	106.7	148.7	174.8	183.9
87.5°	42.0	79.4	122.6	148.7	157.8
90°	19.3	56.7	98.7	126.0	135.1
92.5°	17.0	52.2	93.1	120.3	128.2
95°	15.9	47.7	87.4	113.5	121.4
97.5°	14.8	43.1	81.7	107.8	115.8
100°	13.6	38.6	77.2	102.1	110.1
102.5°	12.5	35.2	71.5	96.5	103.3
105°	11.3	30.6	67.0	90.8	98.7
107.5°	10.2	26.1	62.4	85.1	93.1
110°	9.1	22.7	56.7	79.4	87.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.9	19.3	52.2	73.8	81.7
115°	7.9	15.9	46.5	68.1	76.0
117.5°	6.8	12.5	40.9	62.4	70.4
120°	5.7	9.1	36.3	56.7	64.7
122.5°	5.7	6.8	31.8	51.1	59.0
125°	4.5	4.5	27.2	44.3	52.2
127.5°	4.5	3.4	22.7	39.7	45.4
130°	3.4	2.3	19.3	35.2	40.9
132.5°	3.4	2.3	14.8	30.6	36.3
135°	2.3	2.3	10.2	26.1	30.6
137.5°	2.3	1.1	6.8	20.4	26.1
140°	1.1	1.1	2.3	15.9	20.4
142.5°	1.1	1.1	1.1	11.3	15.9
145°	1.1	0.0	0.0	6.8	10.2
147.5°	1.1	0.0	0.0	2.3	5.7
150°	0.0	0.0	0.0	0.0	1.1
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)