

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: P243727

Luminaire Tested: **S125DR-H1090D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243727  
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-H1090D940-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3607.2 lumens  
Efficiency: N/A  
Efficacy: 114.5 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

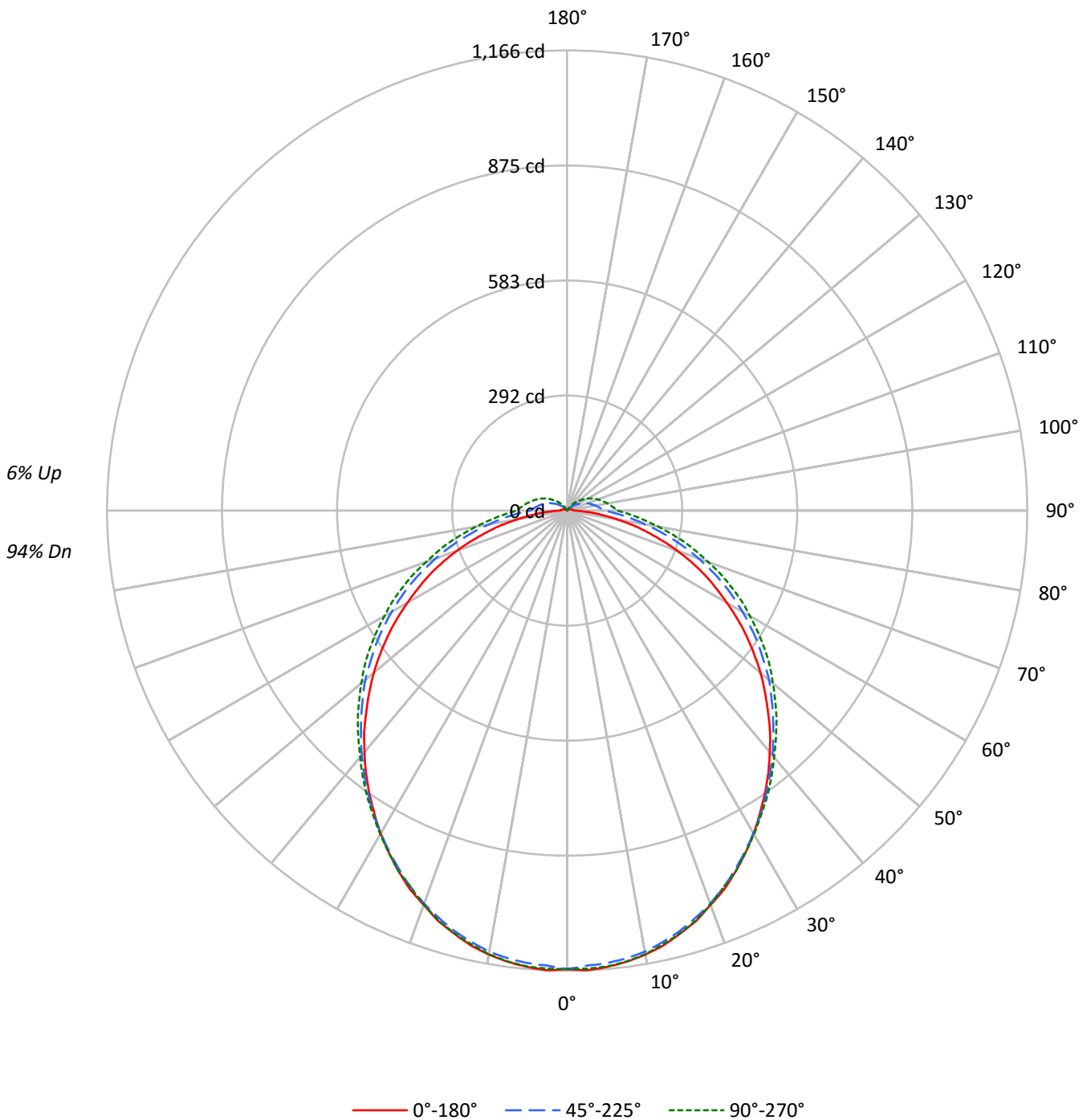
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	8257	8257	8257
5°	8265	8094	8122
10°	8214	7958	7939
15°	8114	7768	7713
20°	7978	7559	7453
25°	7836	7315	7199
30°	7660	7068	6920
35°	7471	6827	6671
40°	7280	6593	6422
45°	7079	6359	6218
50°	6899	6165	6002
55°	6673	5926	5803
60°	6401	5666	5551
65°	6180	5394	5303
70°	5814	5057	4981
75°	5323	4662	4696
80°	4739	4234	4337
85°	4216	3961	4126



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.9	3.0
10°-20°	312.3	8.7
20°-30°	464.9	12.9
30°-40°	550.8	15.3
40°-50°	569.9	15.8
50°-60°	525.6	14.6
60°-70°	424.8	11.8
70°-80°	283.8	7.9
80°-90°	146.4	4.1
90°-100°	82.1	2.3
100°-110°	60.9	1.7
110°-120°	40.6	1.1
120°-130°	22.7	0.6
130°-140°	10.2	0.3
140°-150°	2.2	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	887.2	24.6
0°-40°	1438.0	39.9
0°-60°	2533.5	70.2
0°-90°	3388.6	93.9
90°-120°	183.6	5.1
90°-150°	218.6	6.1
90°-180°	219.0	6.1
0°-180°	3607.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1161	1160	1151	1160	1160	110
15°	1109	1112	1103	1109	1108	313
25°	1009	1014	1005	1010	1009	465
35°	874	880	878	883	884	547
45°	719	731	738	749	750	556
55°	555	572	592	606	611	496
65°	384	407	435	454	460	379
75°	209	240	275	298	307	222
85°	64	101	141	165	174	66
90°	18	54	93	119	128	13
95°	15	45	83	107	115	12
105°	11	29	63	86	93	11
115°	8	15	44	64	72	7
125°	4	4	26	42	49	4
135°	2	2	10	25	29	2
145°	1	0	0	6	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°	1161.8	1161.8	1161.8	1161.8	1161.8
2.5°	1166.0	1162.8	1154.2	1162.8	1161.8
5°	1160.7	1159.6	1151.0	1159.6	1159.6
7.5°	1153.2	1152.1	1144.6	1153.2	1152.1
10°	1142.4	1142.4	1134.9	1141.4	1141.4
12.5°	1128.5	1128.5	1119.9	1127.4	1125.2
15°	1109.1	1112.4	1102.7	1109.1	1108.1
17.5°	1089.8	1089.8	1082.3	1087.7	1087.7
20°	1063.0	1067.3	1059.8	1065.1	1061.9
22.5°	1039.4	1041.5	1034.0	1039.4	1034.0
25°	1009.3	1013.6	1005.0	1010.4	1009.3
27.5°	978.1	981.4	974.9	981.4	978.1
30°	944.9	948.1	943.8	948.1	947.0
32.5°	909.4	915.9	912.7	915.9	914.8
35°	874.0	880.4	878.3	882.6	883.7
37.5°	837.5	843.9	843.9	849.3	850.4
40°	798.8	807.4	809.6	817.1	816.0
42.5°	761.3	769.8	773.1	782.7	782.7
45°	719.4	731.2	737.6	749.4	750.5
47.5°	679.7	692.5	702.2	712.9	715.1
50°	639.9	651.7	667.8	678.6	680.7
52.5°	597.0	612.0	628.1	643.2	647.4
55°	555.1	572.3	591.6	605.6	610.9
57.5°	512.2	530.4	551.9	569.1	573.4
60°	467.1	488.5	513.2	530.4	534.7
62.5°	425.2	448.8	474.6	492.8	499.3
65°	384.4	406.9	434.9	454.2	459.5
67.5°	340.4	365.1	394.1	415.5	420.9
70°	296.3	323.2	354.3	374.7	380.1
72.5°	251.2	281.3	314.6	337.1	343.6
75°	209.4	240.5	274.9	298.5	307.1
77.5°	169.6	201.9	236.2	260.9	268.4
80°	129.9	163.2	200.8	226.6	234.1
82.5°	94.5	129.9	168.6	194.3	201.9
85°	64.4	100.9	140.7	165.4	173.9
87.5°	39.7	75.2	116.0	140.7	149.2
90°	18.3	53.7	93.4	119.2	127.8
92.5°	16.1	49.4	88.0	113.8	121.3
95°	15.0	45.1	82.7	107.4	114.9
97.5°	14.0	40.8	77.3	102.0	109.5
100°	12.9	36.5	73.0	96.6	104.1
102.5°	11.8	33.3	67.6	91.3	97.7
105°	10.7	29.0	63.3	85.9	93.4
107.5°	9.7	24.7	59.1	80.5	88.0
110°	8.6	21.5	53.7	75.2	82.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.5	18.3	49.4	69.8	77.3
115°	7.5	15.0	44.0	64.4	71.9
117.5°	6.4	11.8	38.7	59.1	66.6
120°	5.4	8.6	34.4	53.7	61.2
122.5°	5.4	6.4	30.1	48.3	55.8
125°	4.3	4.3	25.8	41.9	49.4
127.5°	4.3	3.2	21.5	37.6	42.9
130°	3.2	2.1	18.3	33.3	38.7
132.5°	3.2	2.1	14.0	29.0	34.4
135°	2.1	2.1	9.7	24.7	29.0
137.5°	2.1	1.1	6.4	19.3	24.7
140°	1.1	1.1	2.1	15.0	19.3
142.5°	1.1	1.1	1.1	10.7	15.0
145°	1.1	0.0	0.0	6.4	9.7
147.5°	1.1	0.0	0.0	2.1	5.4
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)