

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: P243722

Luminaire Tested: **S125DR-H1090D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243722  
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-H1090D935-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3482.9 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.22 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')  
CIE Type: Direct

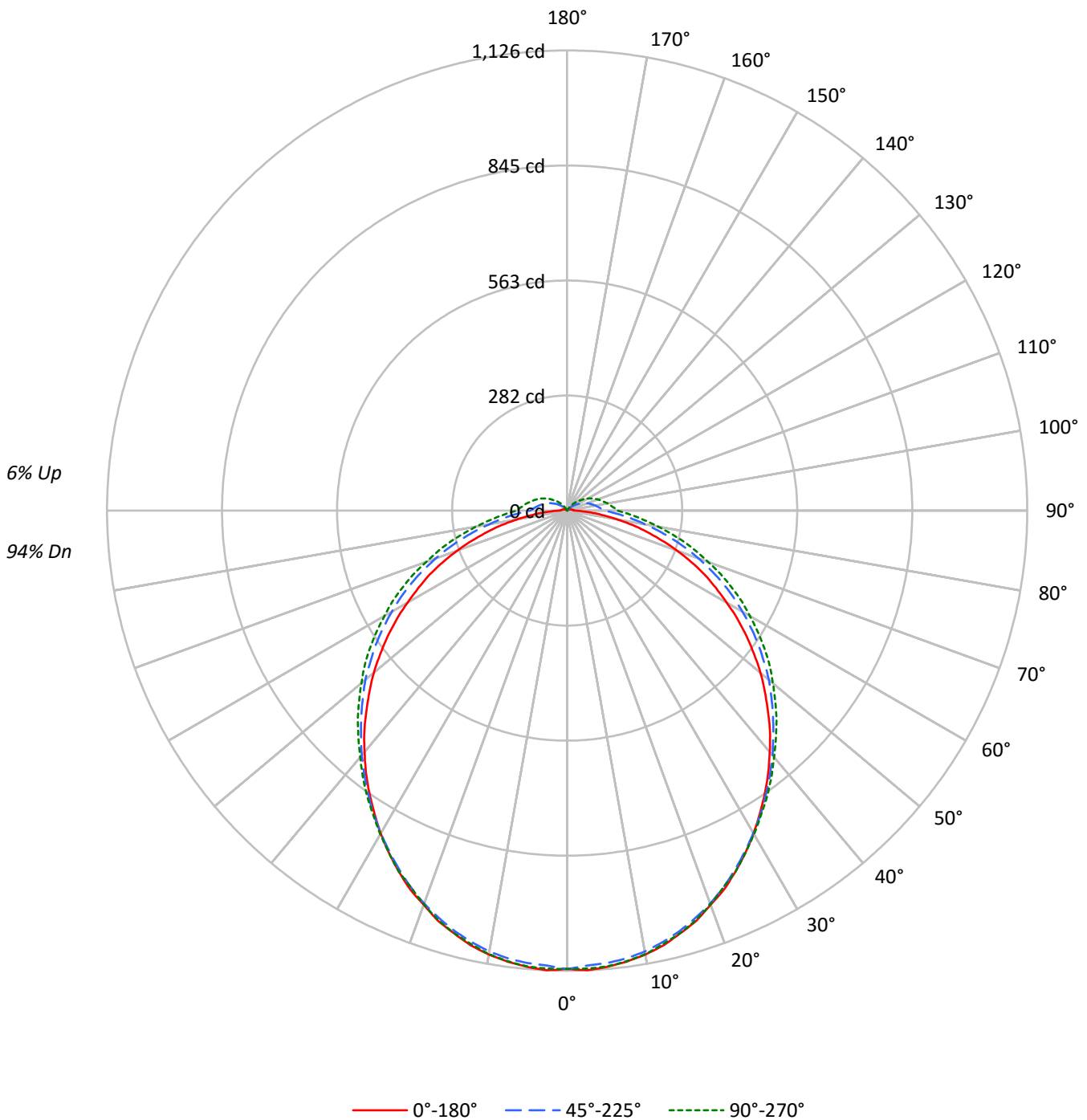
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7972	7972	7972
5°	7981	7816	7842
10°	7931	7684	7665
15°	7835	7501	7447
20°	7703	7299	7196
25°	7566	7063	6951
30°	7395	6825	6682
35°	7213	6592	6441
40°	7029	6366	6201
45°	6835	6140	6004
50°	6661	5952	5795
55°	6444	5722	5603
60°	6181	5472	5360
65°	5966	5208	5121
70°	5614	4883	4809
75°	5140	4500	4534
80°	4575	4088	4187
85°	4071	3823	3986



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.2	3.0
10°-20°	301.6	8.7
20°-30°	448.9	12.9
30°-40°	531.8	15.3
40°-50°	550.3	15.8
50°-60°	507.5	14.6
60°-70°	410.1	11.8
70°-80°	274.1	7.9
80°-90°	141.4	4.1
90°-100°	79.3	2.3
100°-110°	58.8	1.7
110°-120°	39.2	1.1
120°-130°	21.9	0.6
130°-140°	9.8	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	856.6	24.6
0°-40°	1388.5	39.9
0°-60°	2446.3	70.2
0°-90°	3271.9	93.9
90°-120°	177.3	5.1
90°-150°	211.1	6.1
90°-180°	211.0	6.1
0°-180°	3482.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1121	1120	1111	1120	1120	106
15°	1071	1074	1065	1071	1070	302
25°	974	979	970	976	974	449
35°	844	850	848	852	853	528
45°	695	706	712	724	725	537
55°	536	553	571	585	590	479
65°	371	393	420	438	444	366
75°	202	232	265	288	296	215
85°	62	98	136	160	168	64
90°	18	52	90	115	123	12
95°	14	44	80	104	111	11
105°	10	28	61	83	90	11
115°	7	14	42	62	70	7
125°	4	4	25	40	48	4
135°	2	2	9	24	28	2
145°	1	0	0	6	9	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°	1121.7	1121.7	1121.7	1121.7	1121.7
2.5°	1125.9	1122.8	1114.5	1122.8	1121.7
5°	1120.7	1119.7	1111.4	1119.7	1119.7
7.5°	1113.4	1112.4	1105.2	1113.4	1112.4
10°	1103.1	1103.1	1095.8	1102.0	1102.0
12.5°	1089.6	1089.6	1081.3	1088.6	1086.5
15°	1070.9	1074.1	1064.7	1070.9	1069.9
17.5°	1052.3	1052.3	1045.0	1050.2	1050.2
20°	1026.4	1030.5	1023.3	1028.4	1025.3
22.5°	1003.6	1005.6	998.4	1003.6	998.4
25°	974.5	978.7	970.4	975.6	974.5
27.5°	944.5	947.6	941.4	947.6	944.5
30°	912.3	915.4	911.3	915.4	914.4
32.5°	878.1	884.3	881.2	884.3	883.3
35°	843.9	850.1	848.0	852.2	853.2
37.5°	808.6	814.9	814.9	820.1	821.1
40°	771.3	779.6	781.7	789.0	787.9
42.5°	735.0	743.3	746.4	755.8	755.8
45°	694.6	706.0	712.2	723.6	724.7
47.5°	656.3	668.7	678.0	688.4	690.5
50°	617.9	629.3	644.8	655.2	657.3
52.5°	576.4	590.9	606.5	621.0	625.1
55°	536.0	552.6	571.2	584.7	589.9
57.5°	494.5	512.1	532.9	549.5	553.6
60°	451.0	471.7	495.6	512.1	516.3
62.5°	410.5	433.4	458.2	475.9	482.1
65°	371.1	392.9	419.9	438.5	443.7
67.5°	328.6	352.5	380.5	401.2	406.4
70°	286.1	312.1	342.1	361.8	367.0
72.5°	242.6	271.6	303.8	325.5	331.8
75°	202.2	232.2	265.4	288.2	296.5
77.5°	163.8	194.9	228.1	251.9	259.2
80°	125.4	157.6	193.9	218.8	226.0
82.5°	91.2	125.4	162.8	187.6	194.9
85°	62.2	97.5	135.8	159.7	168.0
87.5°	38.4	72.6	112.0	135.8	144.1
90°	17.6	51.8	90.2	115.1	123.4
92.5°	15.6	47.7	85.0	109.9	117.2
95°	14.5	43.5	79.8	103.7	110.9
97.5°	13.5	39.4	74.6	98.5	105.7
100°	12.4	35.2	70.5	93.3	100.6
102.5°	11.4	32.1	65.3	88.1	94.3
105°	10.4	28.0	61.2	82.9	90.2
107.5°	9.3	23.8	57.0	77.8	85.0
110°	8.3	20.7	51.8	72.6	79.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	17.6	47.7	67.4	74.6
115°	7.3	14.5	42.5	62.2	69.5
117.5°	6.2	11.4	37.3	57.0	64.3
120°	5.2	8.3	33.2	51.8	59.1
122.5°	5.2	6.2	29.0	46.7	53.9
125°	4.1	4.1	24.9	40.4	47.7
127.5°	4.1	3.1	20.7	36.3	41.5
130°	3.1	2.1	17.6	32.1	37.3
132.5°	3.1	2.1	13.5	28.0	33.2
135°	2.1	2.1	9.3	23.8	28.0
137.5°	2.1	1.0	6.2	18.7	23.8
140°	1.0	1.0	2.1	14.5	18.7
142.5°	1.0	1.0	1.0	10.4	14.5
145°	1.0	0.0	0.0	6.2	9.3
147.5°	1.0	0.0	0.0	2.1	5.2
150°	0.0	0.0	0.0	0.0	1.0
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)