

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: P242838

Luminaire Tested: **S125DR-S1090D927-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242838  
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-S1090D927-X4F0-XX-UDD-D-W  
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3192.1 lumens  
Efficiency: N/A  
Efficacy: 91.7 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

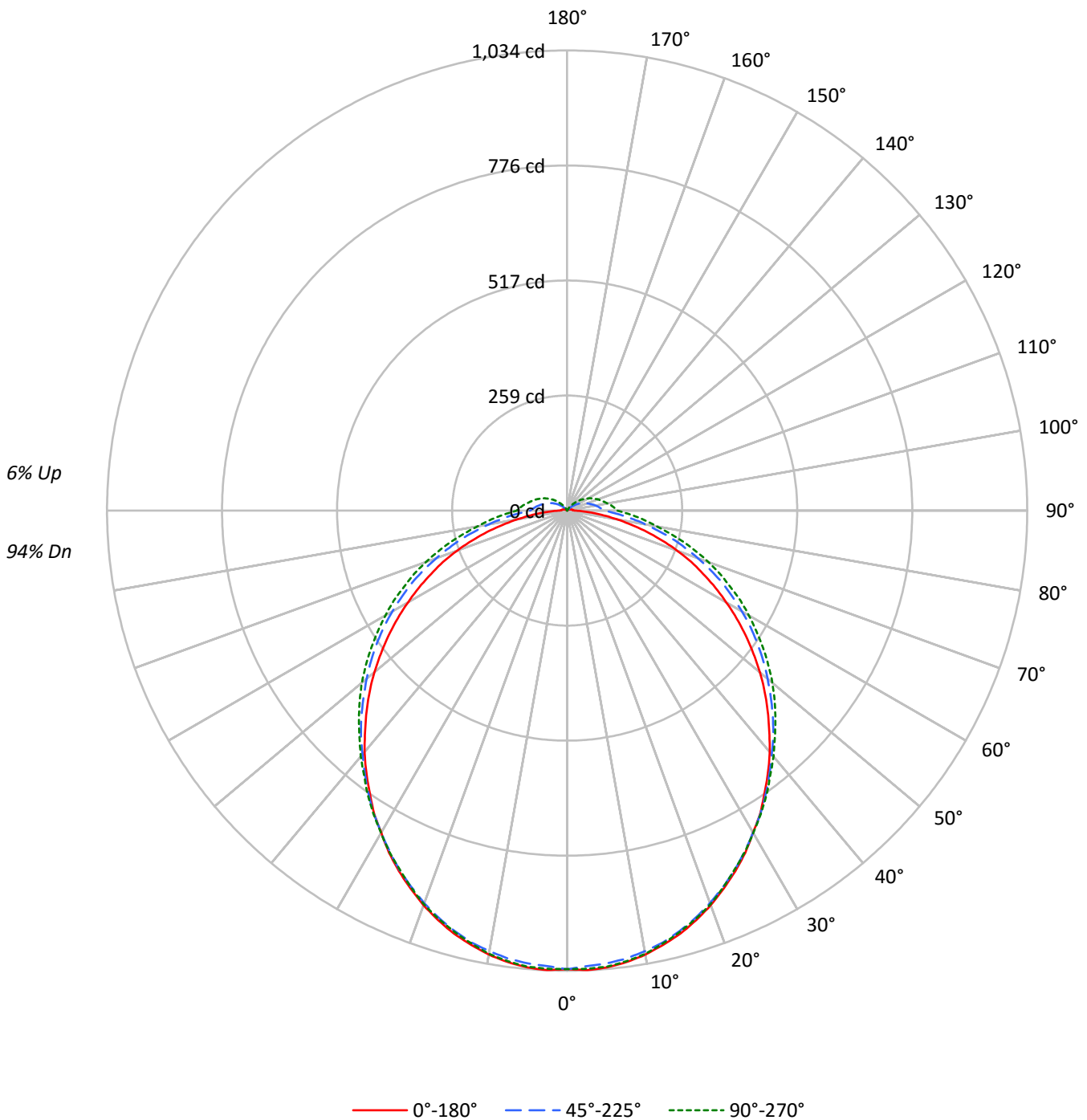
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7323	7323	7323
5°	7338	7182	7203
10°	7285	7048	7033
15°	7199	6889	6821
20°	7081	6694	6608
25°	6942	6485	6348
30°	6773	6257	6113
35°	6614	6047	5895
40°	6454	5824	5677
45°	6273	5634	5482
50°	6099	5428	5309
55°	5891	5232	5105
60°	5663	5008	4898
65°	5424	4774	4664
70°	5154	4456	4421
75°	4726	4146	4124
80°	4166	3770	3800
85°	3639	3499	3668



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.5	3.1
10°-20°	276.8	8.7
20°-30°	411.6	12.9
30°-40°	487.5	15.3
40°-50°	504.0	15.8
50°-60°	464.3	14.5
60°-70°	375.3	11.8
70°-80°	251.1	7.9
80°-90°	129.8	4.1
90°-100°	73.1	2.3
100°-110°	53.9	1.7
110°-120°	36.1	1.1
120°-130°	20.4	0.6
130°-140°	8.9	0.3
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	785.9	24.6
0°-40°	1273.4	39.9
0°-60°	2241.7	70.2
0°-90°	2997.9	93.9
90°-120°	163.1	5.1
90°-150°	194.2	6.1
90°-180°	194.0	6.1
0°-180°	3192.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1030	1028	1021	1029	1028	98
15°	984	985	978	984	980	277
25°	894	897	891	895	890	412
35°	774	781	778	781	781	484
45°	638	649	654	661	662	492
55°	490	506	522	533	537	438
65°	337	361	385	400	404	335
75°	186	212	244	265	270	197
85°	56	89	124	146	155	58
90°	16	48	83	106	113	11
95°	13	39	74	96	103	10
105°	9	25	56	76	83	10
115°	6	13	39	58	64	6
125°	4	3	23	39	44	3
135°	2	1	8	21	26	2
145°	1	0	0	5	9	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°	1030.4	1030.4	1030.4	1030.4	1030.4
2.5°	1033.5	1031.4	1024.4	1031.4	1030.4
5°	1030.4	1028.4	1021.3	1029.4	1028.4
7.5°	1023.4	1022.3	1015.3	1022.3	1021.3
10°	1013.3	1013.3	1005.2	1012.2	1011.2
12.5°	999.1	1000.1	994.1	999.1	996.1
15°	984.0	985.0	977.9	984.0	979.9
17.5°	964.8	966.8	959.7	964.8	961.7
20°	943.6	945.6	938.5	941.5	941.5
22.5°	919.3	923.3	915.3	919.3	916.3
25°	894.1	897.1	891.0	895.1	890.0
27.5°	866.8	870.8	863.7	866.8	864.8
30°	835.5	841.5	835.5	837.5	836.5
32.5°	807.2	812.2	808.2	810.2	809.2
35°	773.8	780.9	777.9	780.9	780.9
37.5°	741.5	747.6	746.6	750.6	749.6
40°	708.2	716.3	715.2	719.3	721.3
42.5°	671.8	682.9	685.9	691.0	691.0
45°	637.5	648.6	653.6	660.7	661.7
47.5°	602.1	612.2	620.3	630.4	632.4
50°	565.7	576.8	588.0	599.1	602.1
52.5°	527.3	541.5	555.6	567.7	569.8
55°	490.0	506.1	522.3	533.4	537.4
57.5°	451.6	470.8	488.9	501.1	504.1
60°	413.2	433.4	453.6	468.7	471.8
62.5°	375.8	396.0	418.2	435.4	439.4
65°	337.4	360.7	384.9	400.0	404.1
67.5°	302.1	324.3	348.5	366.7	371.8
70°	262.7	285.9	312.2	331.4	337.4
72.5°	224.3	248.5	277.8	299.0	303.1
75°	185.9	212.1	244.5	264.7	269.7
77.5°	148.5	178.8	209.1	231.3	235.4
80°	114.2	144.5	178.8	201.0	205.1
82.5°	82.8	115.2	150.5	171.7	179.8
85°	55.6	88.9	124.3	146.5	154.6
87.5°	35.4	67.7	102.0	125.3	132.3
90°	16.2	48.5	82.8	106.1	113.1
92.5°	14.1	43.4	78.8	101.0	108.1
95°	13.1	39.4	73.7	96.0	103.0
97.5°	12.1	36.4	69.7	90.9	98.0
100°	11.1	32.3	64.7	85.9	91.9
102.5°	10.1	29.3	60.6	80.8	86.9
105°	9.1	25.3	55.6	75.8	82.8
107.5°	8.1	22.2	51.5	71.7	77.8
110°	7.1	19.2	47.5	66.7	73.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7.1	16.2	43.4	61.6	68.7
115°	6.1	13.1	39.4	57.6	63.6
117.5°	5.1	10.1	35.4	52.5	59.6
120°	5.1	8.1	31.3	48.5	54.6
122.5°	4.0	5.1	27.3	43.4	49.5
125°	4.0	3.0	23.2	39.4	44.4
127.5°	3.0	2.0	19.2	34.3	40.4
130°	3.0	2.0	16.2	30.3	35.4
132.5°	2.0	2.0	12.1	26.3	30.3
135°	2.0	1.0	8.1	21.2	26.3
137.5°	2.0	1.0	5.1	17.2	21.2
140°	1.0	1.0	2.0	13.1	17.2
142.5°	1.0	0.0	0.0	9.1	13.1
145°	1.0	0.0	0.0	5.1	9.1
147.5°	0.0	0.0	0.0	2.0	4.0
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)