

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: P242101

Luminaire Tested: **S121DR-S1025D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242101  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-S1025D930-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3323.3 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

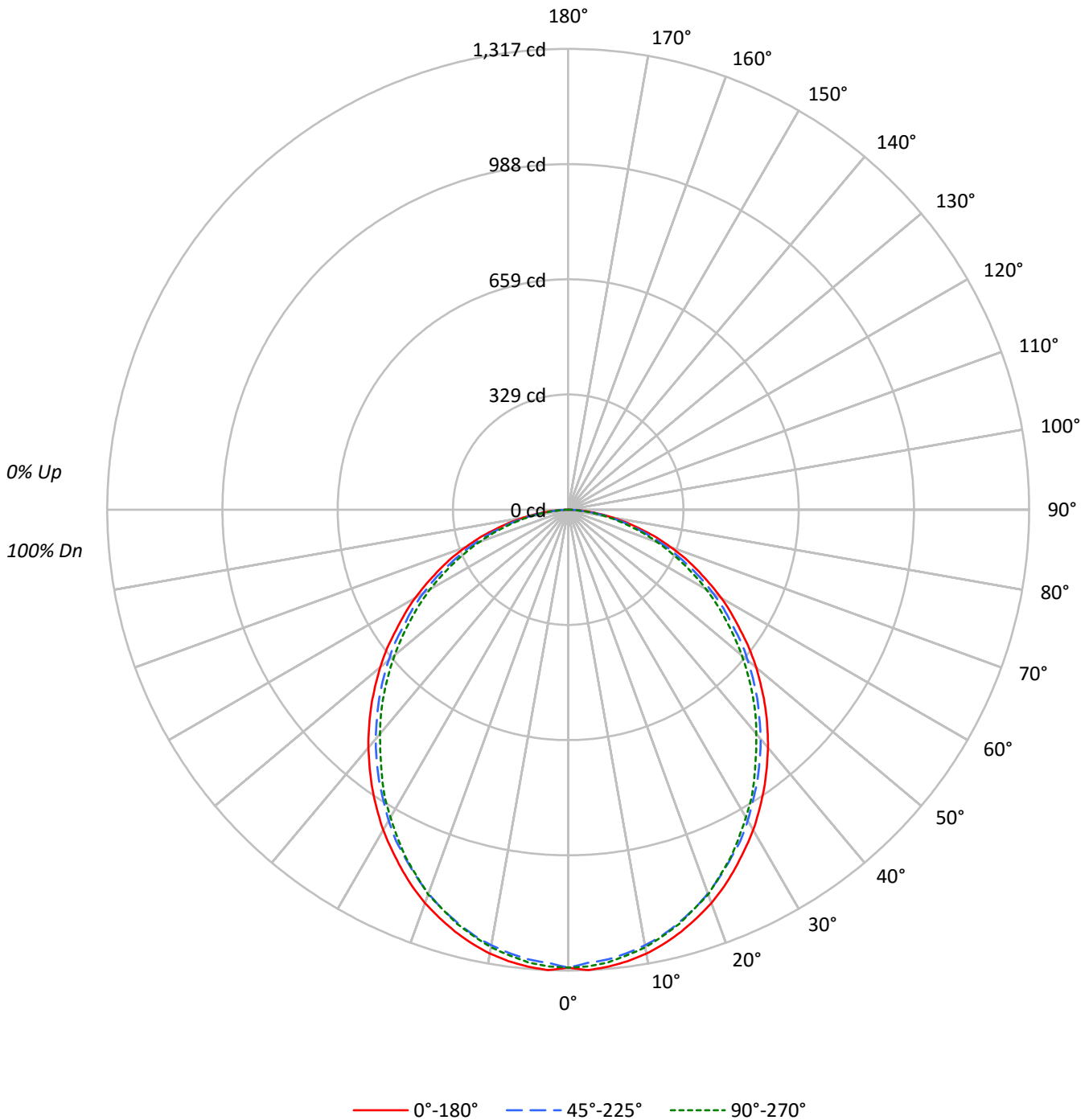
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	38773	38773	38773
5°	38993	38383	38636
10°	38755	38027	38210
15°	38288	37472	37586
20°	37721	36806	36882
25°	36936	35949	35870
30°	36174	35100	34727
35°	35271	34091	33567
40°	34351	33090	32343
45°	33367	32001	31188
50°	32304	30856	29856
55°	31021	29460	28401
60°	29932	28356	27070
65°	28465	26600	25247
70°	26795	24811	23451
75°	24625	22553	21030
80°	21858	19793	18343
85°	18086	14788	13157



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.2	3.7
10°-20°	347.0	10.4
20°-30°	510.3	15.4
30°-40°	592.6	17.8
40°-50°	591.2	17.8
50°-60°	514.5	15.5
60°-70°	378.9	11.4
70°-80°	211.1	6.4
80°-90°	54.5	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	980.6	29.5
0°-40°	1573.2	47.3
0°-60°	2678.8	80.6
0°-90°	3323.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3323.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1311	1305	1290	1301	1299	124
15°	1248	1238	1222	1230	1225	352
25°	1130	1118	1100	1102	1097	521
35°	975	963	942	933	928	610
45°	796	783	764	749	744	614
55°	600	593	570	560	550	539
65°	406	398	379	367	360	403
75°	215	209	197	188	184	229
85°	53	51	44	41	39	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1308.6	1308.6	1308.6	1308.6	1308.6
2.5°	1317.1	1309.8	1296.5	1307.4	1306.2
5°	1311.0	1305.0	1290.5	1301.4	1299.0
7.5°	1301.4	1294.1	1278.4	1288.1	1284.5
10°	1288.1	1280.8	1263.9	1271.2	1270.0
12.5°	1270.0	1261.5	1245.8	1251.8	1248.2
15°	1248.2	1238.5	1221.6	1230.1	1225.3
17.5°	1222.8	1212.0	1196.3	1201.1	1196.3
20°	1196.3	1184.2	1167.3	1172.1	1169.7
22.5°	1164.8	1154.0	1134.6	1137.0	1132.2
25°	1129.8	1117.7	1099.6	1102.0	1097.2
27.5°	1093.5	1082.7	1065.8	1062.1	1056.1
30°	1057.3	1044.0	1025.9	1021.0	1015.0
32.5°	1016.2	1004.1	983.6	978.8	975.1
35°	975.1	963.0	942.5	932.8	928.0
37.5°	931.6	919.5	899.0	888.1	880.9
40°	888.1	874.8	855.5	844.6	836.2
42.5°	842.2	830.1	808.4	797.5	791.5
45°	796.3	783.0	763.7	749.2	744.3
47.5°	748.0	735.9	716.5	700.8	696.0
50°	700.8	687.5	669.4	653.7	647.7
52.5°	652.5	640.4	623.5	607.8	598.1
55°	600.5	593.3	570.3	559.5	549.8
57.5°	553.4	545.0	526.8	508.7	502.7
60°	505.1	495.4	478.5	462.8	456.8
62.5°	454.3	447.1	430.2	415.7	407.2
65°	406.0	397.5	379.4	367.3	360.1
67.5°	361.3	350.4	332.3	320.2	314.2
70°	309.3	300.9	286.4	276.7	270.7
72.5°	264.6	255.0	241.7	232.0	226.0
75°	215.1	209.0	197.0	188.5	183.7
77.5°	171.6	163.1	154.7	148.6	145.0
80°	128.1	122.0	116.0	110.0	107.5
82.5°	89.4	84.6	78.5	74.9	71.3
85°	53.2	50.8	43.5	41.1	38.7
87.5°	25.4	21.8	14.5	13.3	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)