

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: P242947

Luminaire Tested: **S121DR-H1025D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242947  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-47)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-H1025D830-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH 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: 3629.2 lumens  
Efficiency: N/A  
Efficacy: 96.3 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

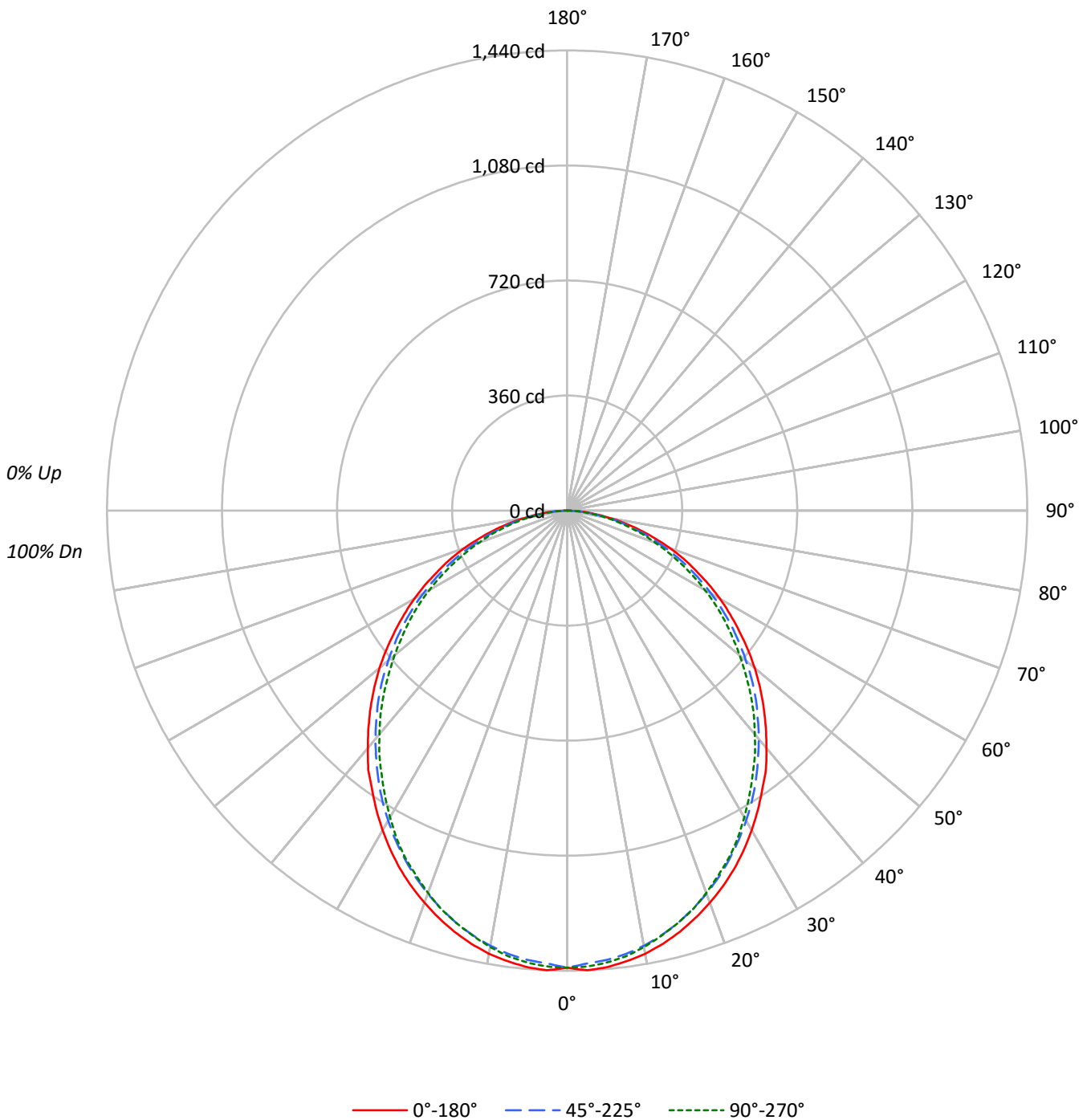
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P242947

CATALOG NUMBER: S121DR-H1025D830-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242947

CATALOG NUMBER: S121DR-H1025D830-X4F0-XX-UDD-F-W

**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	97	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	73	66	88	79	72	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°	42385	42385	42385
5°	42666	41997	42232
10°	42362	41604	41724
15°	41847	40994	40994
20°	41177	40215	40133
25°	40441	39313	39182
30°	39510	38329	37922
35°	38508	37260	36591
40°	37538	36103	35333
45°	36443	35001	34000
50°	35323	33673	32511
55°	33970	32395	31160
60°	32765	30874	29541
65°	31136	29187	27609
70°	29515	27107	25383
75°	27017	24590	23068
80°	23530	21721	20134
85°	20296	16692	13972



TEST NUMBER: P242947

CATALOG NUMBER: S121DR-H1025D830-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.8	3.7
10°-20°	379.3	10.5
20°-30°	557.6	15.4
30°-40°	647.1	17.8
40°-50°	645.4	17.8
50°-60°	561.9	15.5
60°-70°	413.6	11.4
70°-80°	230.3	6.3
80°-90°	59.2	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°	1071.7	29.5
0°-40°	1718.8	47.4
0°-60°	2926.1	80.6
0°-90°	3629.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1430	1430	1430	1430	1430	
5°	1434	1427	1412	1423	1420	136
15°	1364	1356	1336	1342	1336	384
25°	1237	1222	1202	1202	1198	569
35°	1065	1051	1030	1018	1012	667
45°	870	855	835	818	811	671
55°	658	646	627	610	603	589
65°	444	435	416	399	394	441
75°	236	225	215	206	202	250
85°	60	56	49	42	41	69
90°	0	0	0	0	0	



TEST NUMBER: P242947

CATALOG NUMBER: S121DR-H1025D830-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1430.5	1430.5	1430.5	1430.5	1430.5
2.5°	1439.8	1431.9	1418.6	1430.5	1427.9
5°	1434.5	1426.6	1412.0	1422.6	1419.9
7.5°	1422.6	1416.0	1400.0	1409.3	1406.7
10°	1408.0	1400.0	1382.8	1390.8	1386.8
12.5°	1388.1	1381.5	1361.6	1368.2	1362.9
15°	1364.2	1356.3	1336.4	1341.7	1336.4
17.5°	1336.4	1328.5	1307.2	1311.2	1308.6
20°	1305.9	1295.3	1275.4	1278.1	1272.8
22.5°	1272.8	1260.8	1240.9	1240.9	1235.6
25°	1237.0	1222.4	1202.5	1202.5	1198.5
27.5°	1197.2	1183.9	1162.7	1160.1	1156.1
30°	1154.8	1141.5	1120.3	1115.0	1108.4
32.5°	1111.0	1096.4	1076.5	1067.3	1060.6
35°	1064.6	1051.4	1030.1	1018.2	1011.6
37.5°	1022.2	1003.6	981.1	970.5	965.2
40°	970.5	954.6	933.4	918.8	913.5
42.5°	920.1	905.5	883.0	868.4	864.4
45°	869.7	855.1	835.3	818.0	811.4
47.5°	818.0	803.4	783.5	766.3	757.0
50°	766.3	751.7	730.5	713.3	705.3
52.5°	712.0	701.3	678.8	662.9	652.3
55°	657.6	645.7	627.1	609.9	603.2
57.5°	604.6	594.0	574.1	555.5	551.5
60°	552.9	542.3	521.0	505.1	498.5
62.5°	498.5	487.9	468.0	452.1	445.5
65°	444.1	434.9	416.3	399.1	393.8
67.5°	393.8	381.8	364.6	348.7	342.1
70°	340.7	327.5	312.9	299.6	293.0
72.5°	287.7	277.1	265.2	251.9	249.3
75°	236.0	225.4	214.8	205.5	201.5
77.5°	186.9	179.0	171.0	161.7	159.1
80°	137.9	132.6	127.3	120.6	118.0
82.5°	96.8	92.8	84.9	79.5	76.9
85°	59.7	55.7	49.1	42.4	41.1
87.5°	27.8	22.5	17.2	14.6	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)