

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: P242956

Luminaire Tested: **S121DR-H1025D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242956  
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-H1025D840-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3888.4 lumens  
Efficiency: N/A  
Efficacy: 103.1 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

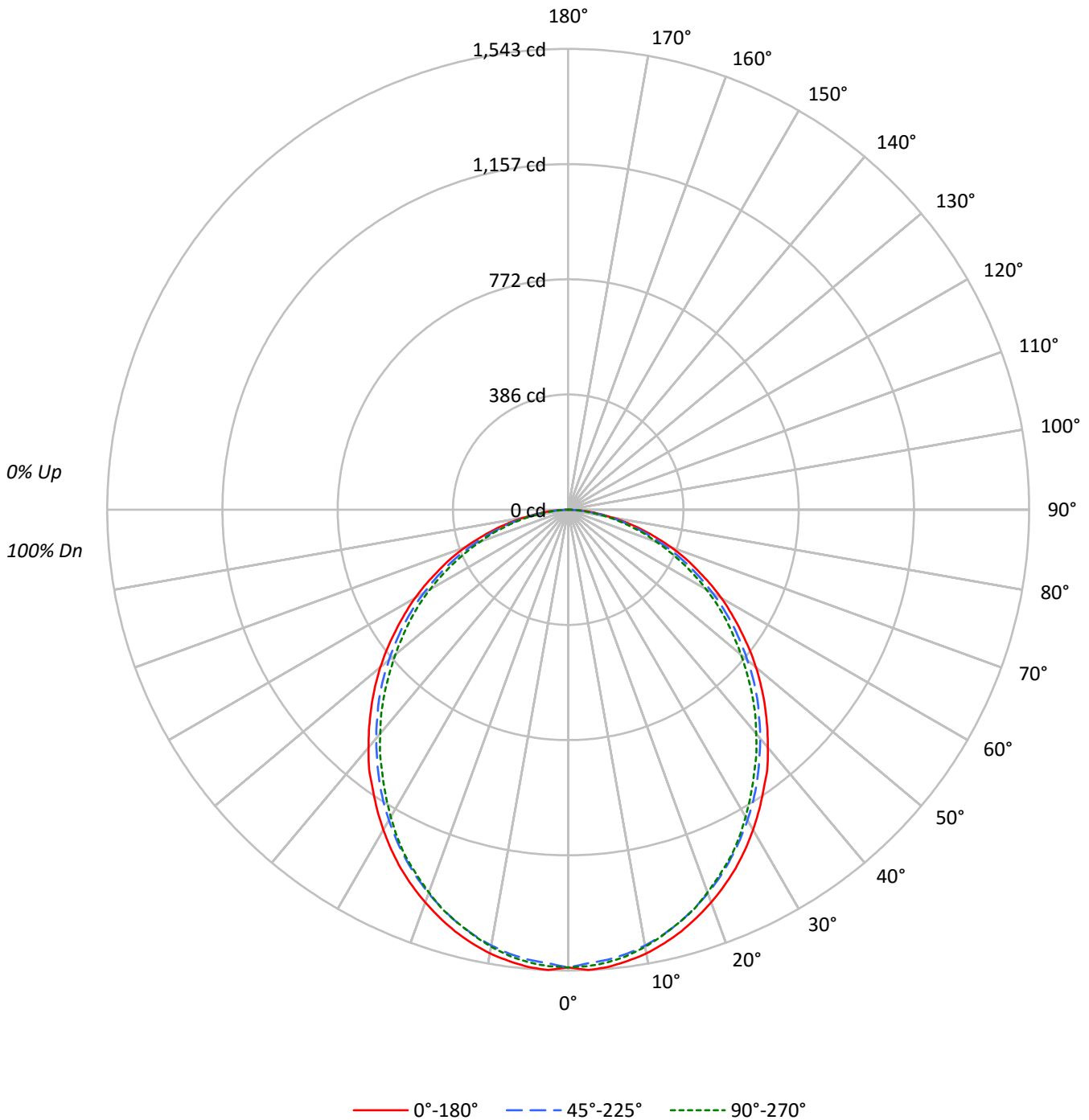
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	81	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°	45413	45413	45413
5°	45715	44995	45251
10°	45389	44577	44703
15°	44838	43923	43923
20°	44119	43087	42999
25°	43328	42121	41981
30°	42332	41066	40628
35°	41260	39922	39202
40°	40218	38679	37855
45°	39045	37499	36426
50°	37845	36079	34834
55°	36398	34709	33386
60°	35099	33085	31650
65°	33365	31269	29579
70°	31629	29039	27194
75°	28941	26342	24716
80°	25202	23274	21568
85°	21724	17882	14958



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.4	3.7
10°-20°	406.4	10.5
20°-30°	597.4	15.4
30°-40°	693.4	17.8
40°-50°	691.5	17.8
50°-60°	602.0	15.5
60°-70°	443.1	11.4
70°-80°	246.8	6.3
80°-90°	63.4	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°	1148.2	29.5
0°-40°	1841.6	47.4
0°-60°	3135.1	80.6
0°-90°	3888.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3888.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1533	1533	1533	1533	1533	
5°	1537	1528	1513	1524	1521	146
15°	1462	1453	1432	1438	1432	412
25°	1325	1310	1288	1288	1284	610
35°	1141	1126	1104	1091	1084	715
45°	932	916	895	876	869	719
55°	705	692	672	653	646	631
65°	476	466	446	428	422	473
75°	253	242	230	220	216	268
85°	64	60	53	46	44	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1532.7	1532.7	1532.7	1532.7	1532.7
2.5°	1542.7	1534.1	1519.9	1532.7	1529.9
5°	1537.0	1528.5	1512.8	1524.2	1521.4
7.5°	1524.2	1517.1	1500.0	1510.0	1507.1
10°	1508.6	1500.0	1481.6	1490.1	1485.8
12.5°	1487.3	1480.2	1458.8	1466.0	1460.3
15°	1461.7	1453.2	1431.9	1437.5	1431.9
17.5°	1431.9	1423.3	1400.6	1404.9	1402.0
20°	1399.2	1387.8	1366.5	1369.4	1363.7
22.5°	1363.7	1350.9	1329.6	1329.6	1323.9
25°	1325.3	1309.7	1288.4	1288.4	1284.1
27.5°	1282.7	1268.5	1245.8	1242.9	1238.7
30°	1237.3	1223.0	1200.3	1194.6	1187.5
32.5°	1190.4	1174.8	1153.4	1143.5	1136.4
35°	1140.7	1126.5	1103.7	1090.9	1083.8
37.5°	1095.2	1075.3	1051.2	1039.8	1034.1
40°	1039.8	1022.8	1000.0	984.4	978.7
42.5°	985.8	970.2	946.1	930.4	926.2
45°	931.8	916.2	894.9	876.4	869.3
47.5°	876.4	860.8	839.5	821.0	811.1
50°	821.0	805.4	782.7	764.2	755.7
52.5°	762.8	751.4	727.3	710.2	698.9
55°	704.6	691.8	671.9	653.4	646.3
57.5°	647.7	636.4	615.1	595.2	590.9
60°	592.3	581.0	558.3	541.2	534.1
62.5°	534.1	522.7	501.4	484.4	477.3
65°	475.9	465.9	446.0	427.6	421.9
67.5°	421.9	409.1	390.6	373.6	366.5
70°	365.1	350.9	335.2	321.0	313.9
72.5°	308.2	296.9	284.1	269.9	267.1
75°	252.8	241.5	230.1	220.2	215.9
77.5°	200.3	191.8	183.2	173.3	170.5
80°	147.7	142.0	136.4	129.3	126.4
82.5°	103.7	99.4	90.9	85.2	82.4
85°	63.9	59.7	52.6	45.5	44.0
87.5°	29.8	24.1	18.5	15.6	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)