

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: P243049

Luminaire Tested: **S121RDR-H880D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243049  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-H880D830-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

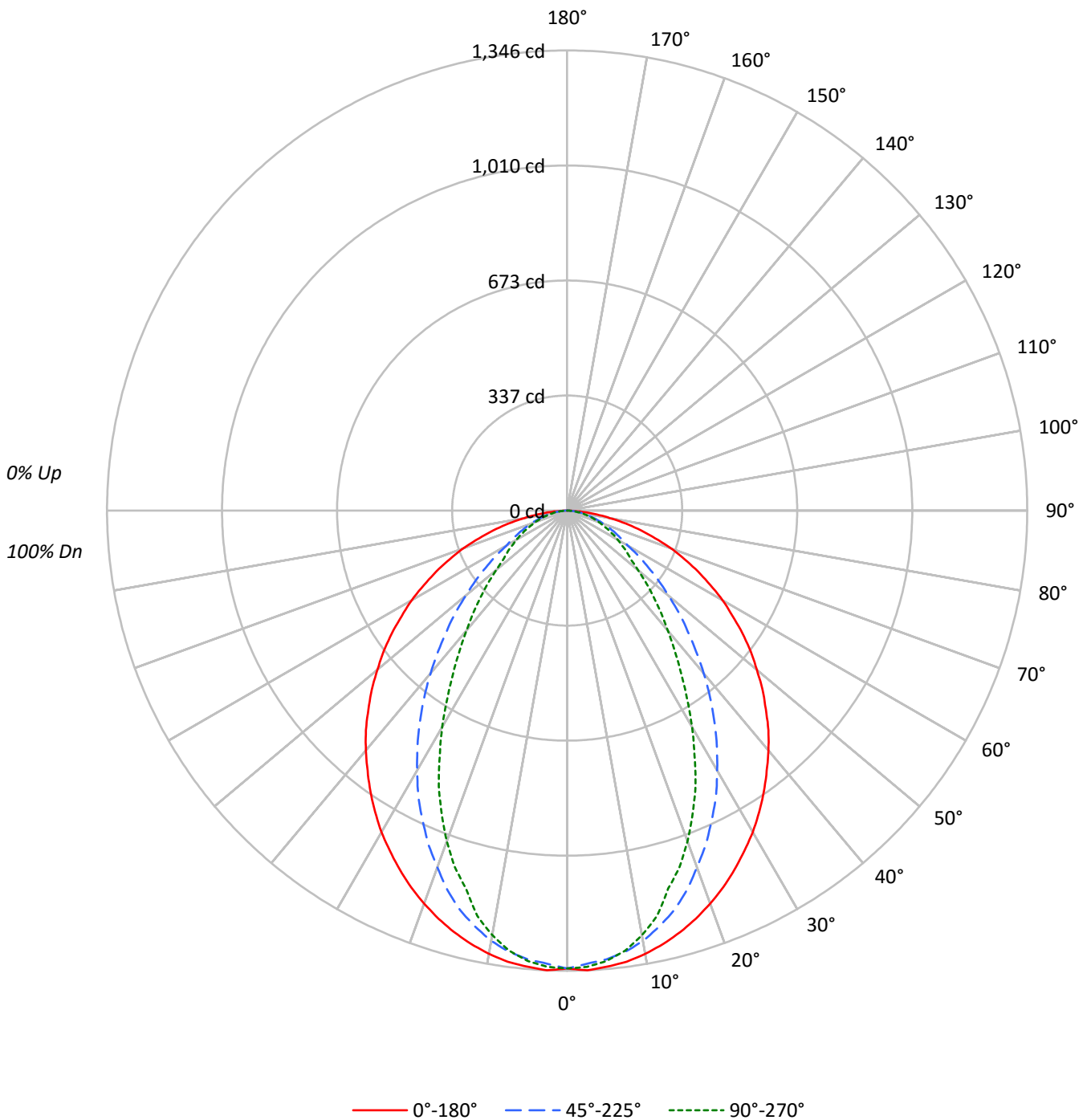
Lumens per Lamp: N/A  
Luminaire Lumens: 2490.6 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<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	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					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89					87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77					75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67					65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59					57				
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52					50				
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42					41				
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32					31				

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

	0°	45°	90°
0°	39680	39680	39680
5°	39832	39189	39326
10°	39609	38448	37936
15°	39166	37111	35092
20°	38575	34997	32458
25°	37881	32689	29051
30°	37159	30015	25007
35°	36291	27136	21019
40°	35426	24054	17692
45°	34431	20876	14980
50°	33378	17788	12450
55°	32364	15007	11081
60°	31141	12172	10157
65°	29600	10902	9311
70°	28025	9833	8551
75°	25598	8838	7796
80°	21875	7747	6979
85°	16964	6561	5779



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.4	5.0
10°-20°	340.8	13.7
20°-30°	465.0	18.7
30°-40°	482.0	19.4
40°-50°	420.6	16.9
50°-60°	316.5	12.7
60°-70°	207.6	8.3
70°-80°	105.8	4.2
80°-90°	26.9	1.1
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°	931.1	37.4
0°-40°	1413.2	56.7
0°-60°	2150.3	86.3
0°-90°	2490.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2490.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1339	1339	1339	1339	1339	
5°	1339	1332	1318	1326	1322	127
15°	1277	1259	1210	1176	1144	360
25°	1159	1111	1000	916	889	534
35°	1003	917	750	624	581	627
45°	822	702	498	387	358	635
55°	626	477	290	220	214	559
65°	422	263	156	137	133	418
75°	224	102	77	70	68	236
85°	50	20	19	17	17	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1339.2	1339.2	1339.2	1339.2	1339.2
2.5°	1346.0	1340.3	1326.7	1338.1	1335.8
5°	1339.2	1332.4	1317.6	1325.6	1322.2
7.5°	1331.3	1322.2	1301.7	1305.2	1298.3
10°	1316.5	1305.2	1277.9	1271.1	1260.9
12.5°	1298.3	1285.9	1246.1	1230.2	1214.4
15°	1276.8	1258.6	1209.8	1175.8	1144.0
17.5°	1251.8	1229.1	1164.4	1116.8	1092.9
20°	1223.4	1193.9	1109.9	1054.3	1029.4
22.5°	1192.8	1155.3	1058.9	988.5	959.0
25°	1158.7	1111.1	999.9	915.9	888.6
27.5°	1122.4	1068.0	943.1	846.6	806.9
30°	1086.1	1018.0	877.3	769.5	730.9
32.5°	1045.3	968.1	814.9	695.7	652.6
35°	1003.3	917.0	750.2	624.2	581.1
37.5°	959.0	865.9	685.5	558.4	516.4
40°	915.9	810.3	621.9	494.8	457.4
42.5°	871.6	754.7	558.4	439.2	407.4
45°	821.7	702.5	498.2	387.0	357.5
47.5°	775.1	645.8	443.8	340.5	313.2
50°	724.1	590.2	385.9	297.3	270.1
52.5°	676.4	533.4	338.2	252.0	234.9
55°	626.5	476.7	290.5	220.2	214.5
57.5°	573.1	421.1	248.5	197.5	190.7
60°	525.5	367.7	205.4	177.0	171.4
62.5°	472.1	314.4	178.2	157.8	152.1
65°	422.2	263.3	155.5	137.3	132.8
67.5°	372.3	216.8	133.9	119.2	114.6
70°	323.5	172.5	113.5	102.1	98.7
72.5°	270.1	130.5	95.3	86.3	84.0
75°	223.6	102.1	77.2	70.4	68.1
77.5°	174.8	77.2	60.2	55.6	54.5
80°	128.2	55.6	45.4	42.0	40.9
82.5°	87.4	37.5	31.8	29.5	28.4
85°	49.9	20.4	19.3	17.0	17.0
87.5°	19.3	7.9	6.8	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)