

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: P243053

Luminaire Tested: **S121RDR-H880D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243053  
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-H880D835-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2642.4 lumens  
Efficiency: N/A  
Efficacy: 83.9 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

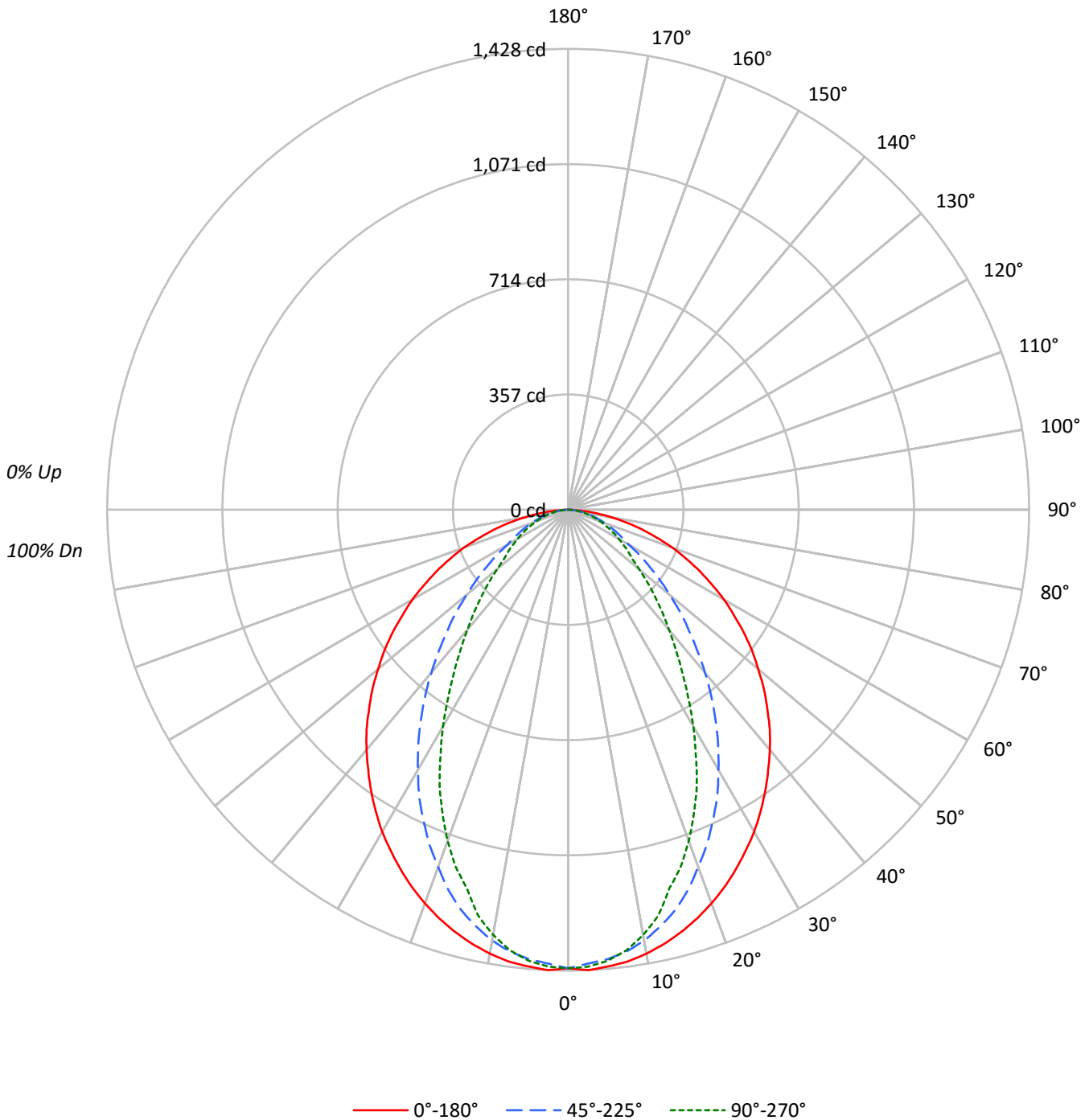
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	42098	42098	42098
5°	42259	41581	41723
10°	42025	40792	40250
15°	41552	39374	37230
20°	40928	37131	34435
25°	40192	34680	30823
30°	39424	31846	26529
35°	38501	28789	22300
40°	37584	25520	18771
45°	36531	22150	15894
50°	35411	18872	13211
55°	34337	15921	11757
60°	33037	12913	10773
65°	31402	11568	9878
70°	29732	10430	9079
75°	27155	9376	8265
80°	23223	8224	7388
85°	18018	6969	6153



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.0	5.0
10°-20°	361.5	13.7
20°-30°	493.3	18.7
30°-40°	511.4	19.4
40°-50°	446.2	16.9
50°-60°	335.8	12.7
60°-70°	220.2	8.3
70°-80°	112.3	4.2
80°-90°	28.5	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°	987.9	37.4
0°-40°	1499.3	56.7
0°-60°	2281.4	86.3
0°-90°	2642.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2642.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1421	1421	1421	1421	1421	
5°	1421	1414	1398	1406	1403	135
15°	1355	1335	1284	1247	1214	382
25°	1229	1179	1061	972	943	566
35°	1064	973	796	662	616	666
45°	872	745	529	411	379	673
55°	665	506	308	234	228	593
65°	448	279	165	146	141	444
75°	237	108	82	75	72	250
85°	53	22	20	18	18	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1420.8	1420.8	1420.8	1420.8	1420.8
2.5°	1428.1	1422.0	1407.6	1419.6	1417.2
5°	1420.8	1413.6	1398.0	1406.4	1402.8
7.5°	1412.4	1402.8	1381.1	1384.7	1377.5
10°	1396.8	1384.7	1355.8	1348.6	1337.8
12.5°	1377.5	1364.2	1322.1	1305.2	1288.4
15°	1354.6	1335.3	1283.6	1247.4	1213.7
17.5°	1328.1	1304.0	1235.4	1184.8	1159.5
20°	1298.0	1266.7	1177.6	1118.6	1092.1
22.5°	1265.5	1225.8	1123.4	1048.8	1017.5
25°	1229.4	1178.8	1060.8	971.7	942.8
27.5°	1190.9	1133.1	1000.6	898.3	856.1
30°	1152.3	1080.1	930.8	816.4	775.4
32.5°	1109.0	1027.1	864.5	738.1	692.4
35°	1064.4	972.9	795.9	662.3	616.5
37.5°	1017.5	918.7	727.3	592.4	547.9
40°	971.7	859.7	659.8	525.0	485.3
42.5°	924.7	800.7	592.4	466.0	432.3
45°	871.8	745.3	528.6	410.6	379.3
47.5°	822.4	685.1	470.8	361.2	332.3
50°	768.2	626.1	409.4	315.5	286.6
52.5°	717.6	565.9	358.8	267.3	249.2
55°	664.7	505.7	308.2	233.6	227.6
57.5°	608.1	446.7	263.7	209.5	202.3
60°	557.5	390.1	217.9	187.8	181.8
62.5°	500.9	333.5	189.0	167.4	161.3
65°	447.9	279.4	165.0	145.7	140.9
67.5°	394.9	230.0	142.1	126.4	121.6
70°	343.2	183.0	120.4	108.4	104.8
72.5°	286.6	138.5	101.1	91.5	89.1
75°	237.2	108.4	81.9	74.7	72.2
77.5°	185.4	81.9	63.8	59.0	57.8
80°	136.1	59.0	48.2	44.6	43.3
82.5°	92.7	39.7	33.7	31.3	30.1
85°	53.0	21.7	20.5	18.1	18.1
87.5°	20.5	8.4	7.2	7.2	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)