

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: P242213

Luminaire Tested: **S121RDR-S880D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242213  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S880D940-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2543.2 lumens  
Efficiency: N/A  
Efficacy: 73.1 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

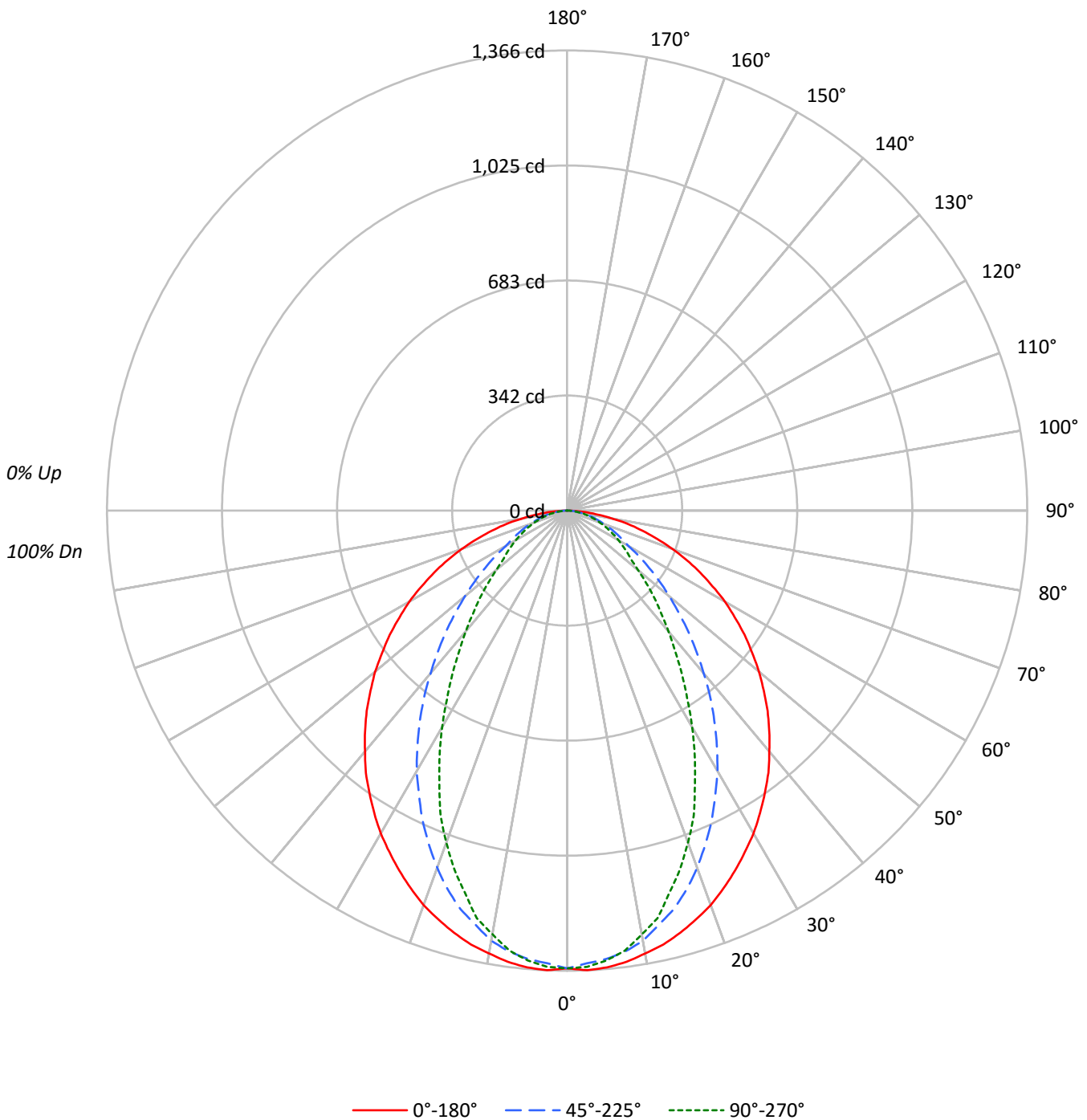
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32					31				

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

	0°	45°	90°
0°	40264	40264	40264
5°	40486	39742	39876
10°	40166	39005	38421
15°	39801	37568	35997
20°	39297	35570	33061
25°	38551	33199	29332
30°	37854	30542	25407
35°	37018	27559	21511
40°	36111	24410	18121
45°	35261	21299	15294
50°	34281	18240	12635
55°	33190	15389	11277
60°	32077	12468	10447
65°	30533	11239	9647
70°	28762	10145	8862
75°	26422	9239	8197
80°	23086	8156	7371
85°	18936	6969	6187



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.2	5.0
10°-20°	346.0	13.6
20°-30°	472.3	18.6
30°-40°	490.9	19.3
40°-50°	428.9	16.9
50°-60°	324.2	12.7
60°-70°	214.1	8.4
70°-80°	110.4	4.3
80°-90°	29.3	1.2
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°	945.5	37.2
0°-40°	1436.3	56.5
0°-60°	2189.4	86.1
0°-90°	2543.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2543.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1359	1359	1359	1359	1359	
5°	1361	1353	1336	1346	1341	129
15°	1298	1278	1225	1193	1174	366
25°	1179	1133	1016	931	897	543
35°	1023	932	762	637	595	640
45°	842	715	508	395	365	648
55°	642	488	298	226	218	574
65°	436	272	160	141	138	431
75°	231	107	81	74	72	246
85°	56	23	20	19	18	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1358.9	1358.9	1358.9	1358.9	1358.9
2.5°	1365.7	1358.9	1345.2	1357.8	1355.5
5°	1361.2	1353.2	1336.2	1346.4	1340.7
7.5°	1350.9	1341.8	1320.2	1323.6	1316.8
10°	1335.0	1324.8	1296.4	1290.7	1277.0
12.5°	1319.1	1303.2	1258.8	1247.5	1239.5
15°	1297.5	1278.2	1224.7	1192.9	1173.5
17.5°	1272.5	1246.3	1179.2	1136.0	1115.5
20°	1246.3	1212.2	1128.1	1068.9	1048.5
22.5°	1213.3	1173.5	1072.3	1001.8	981.4
25°	1179.2	1132.6	1015.5	931.3	897.2
27.5°	1142.8	1086.0	951.8	857.4	819.9
30°	1106.4	1037.1	892.7	778.9	742.6
32.5°	1065.5	988.2	826.7	707.3	664.1
35°	1023.4	932.5	761.9	636.8	594.7
37.5°	981.4	881.3	697.1	570.8	526.5
40°	933.6	827.8	631.1	501.5	468.5
42.5°	888.1	772.1	568.6	448.0	412.8
45°	841.5	715.3	508.3	394.6	365.0
47.5°	791.5	659.5	449.2	348.0	318.4
50°	743.7	600.4	395.7	302.5	274.1
52.5°	691.4	544.7	345.7	255.9	239.9
55°	642.5	487.8	297.9	226.3	218.3
57.5°	590.2	433.3	253.6	204.7	195.6
60°	541.3	378.7	210.4	181.9	176.3
62.5°	486.7	326.4	183.1	161.5	155.8
65°	435.5	271.8	160.3	141.0	137.6
67.5°	384.4	225.2	138.7	122.8	119.4
70°	332.0	178.5	117.1	105.8	102.3
72.5°	280.9	136.5	97.8	88.7	86.4
75°	230.8	106.9	80.7	73.9	71.6
77.5°	186.5	81.9	63.7	58.0	56.9
80°	135.3	60.3	47.8	44.3	43.2
82.5°	92.1	40.9	34.1	31.8	29.6
85°	55.7	22.7	20.5	19.3	18.2
87.5°	22.7	10.2	9.1	8.0	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)