

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: P242111

Luminaire Tested: **S121DR-S1025D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242111  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-S1025D940-X4F0-XX-UDD-F-W  
Description: DEFINE 1 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: 3634.8 lumens  
Efficiency: N/A  
Efficacy: 88.4 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

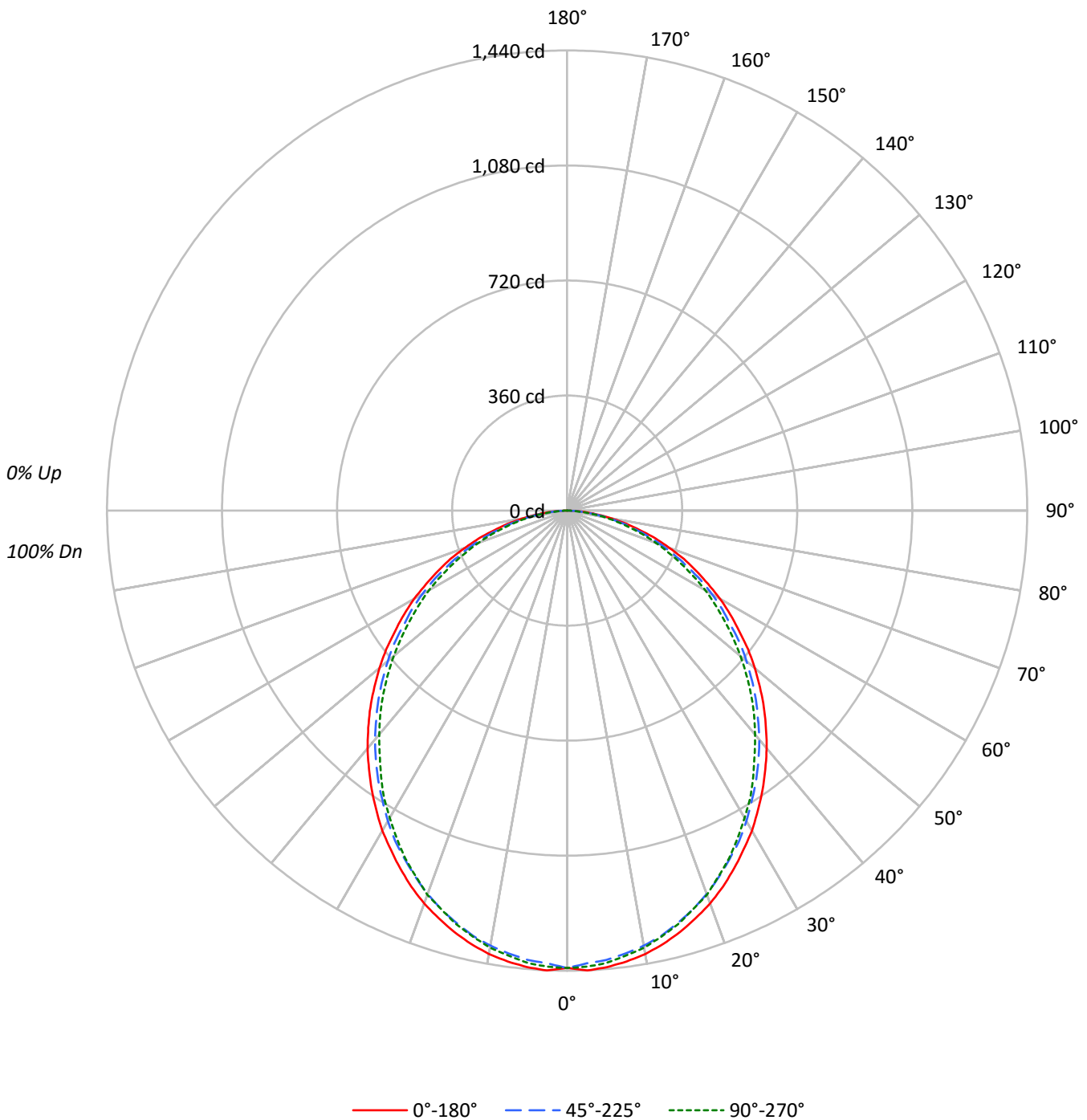
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	96	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	72	66	88	79	71	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°	42409	42409	42409
5°	42648	41982	42256
10°	42386	41592	41791
15°	41877	40985	41107
20°	41256	40256	40338
25°	40398	39316	39231
30°	39564	38387	37980
35°	38577	37285	36714
40°	37573	36192	35372
45°	36493	34997	34113
50°	35332	33751	32654
55°	33929	32224	31062
60°	32735	31010	29606
65°	31136	29096	27609
70°	29307	27133	25643
75°	26926	24659	22999
80°	23905	21653	20066
85°	19752	16182	14380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.8	3.7
10°-20°	379.5	10.4
20°-30°	558.2	15.4
30°-40°	648.1	17.8
40°-50°	646.6	17.8
50°-60°	562.7	15.5
60°-70°	414.4	11.4
70°-80°	230.9	6.4
80°-90°	59.6	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°	1072.5	29.5
0°-40°	1720.6	47.3
0°-60°	2929.9	80.6
0°-90°	3634.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3634.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1431	1431	1431	1431	1431	
5°	1434	1427	1412	1423	1421	136
15°	1365	1355	1336	1345	1340	385
25°	1236	1222	1203	1205	1200	569
35°	1066	1053	1031	1020	1015	667
45°	871	856	835	819	814	671
55°	657	649	624	612	601	589
65°	444	435	415	402	394	441
75°	235	229	215	206	201	251
85°	58	56	48	45	42	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1431.3	1431.3	1431.3	1431.3	1431.3
2.5°	1440.5	1432.6	1418.1	1430.0	1428.6
5°	1433.9	1427.3	1411.5	1423.3	1420.7
7.5°	1423.3	1415.4	1398.2	1408.8	1404.8
10°	1408.8	1400.9	1382.4	1390.3	1389.0
12.5°	1389.0	1379.7	1362.6	1369.2	1365.2
15°	1365.2	1354.6	1336.1	1345.4	1340.1
17.5°	1337.4	1325.5	1308.4	1313.7	1308.4
20°	1308.4	1295.2	1276.7	1281.9	1279.3
22.5°	1274.0	1262.1	1241.0	1243.6	1238.3
25°	1235.7	1222.5	1202.6	1205.3	1200.0
27.5°	1196.0	1184.1	1165.6	1161.7	1155.1
30°	1156.4	1141.8	1122.0	1116.7	1110.1
32.5°	1111.5	1098.2	1075.8	1070.5	1066.5
35°	1066.5	1053.3	1030.8	1020.3	1015.0
37.5°	1018.9	1005.7	983.3	971.4	963.4
40°	971.4	956.8	935.7	923.8	914.5
42.5°	921.1	907.9	884.1	872.2	865.6
45°	870.9	856.4	835.2	819.4	814.1
47.5°	818.1	804.8	783.7	766.5	761.2
50°	766.5	752.0	732.2	715.0	708.4
52.5°	713.7	700.4	681.9	664.8	654.2
55°	656.8	648.9	623.8	611.9	601.3
57.5°	605.3	596.0	576.2	556.4	549.8
60°	552.4	541.8	523.3	506.2	499.6
62.5°	496.9	489.0	470.5	454.6	445.4
65°	444.1	434.8	415.0	401.8	393.8
67.5°	395.2	383.3	363.4	350.2	343.6
70°	338.3	329.1	313.2	302.6	296.0
72.5°	289.4	278.9	264.3	253.7	247.1
75°	235.2	228.6	215.4	206.2	200.9
77.5°	187.7	178.4	169.2	162.6	158.6
80°	140.1	133.5	126.9	120.3	117.6
82.5°	97.8	92.5	85.9	81.9	78.0
85°	58.1	55.5	47.6	44.9	42.3
87.5°	27.8	23.8	15.9	14.5	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)