

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: P242090

Luminaire Tested: **S121DR-S880D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242090
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-S880D835-X4F0-XX-UDD-F-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3507.3 lumens
Efficiency: N/A
Efficacy: 100.8 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

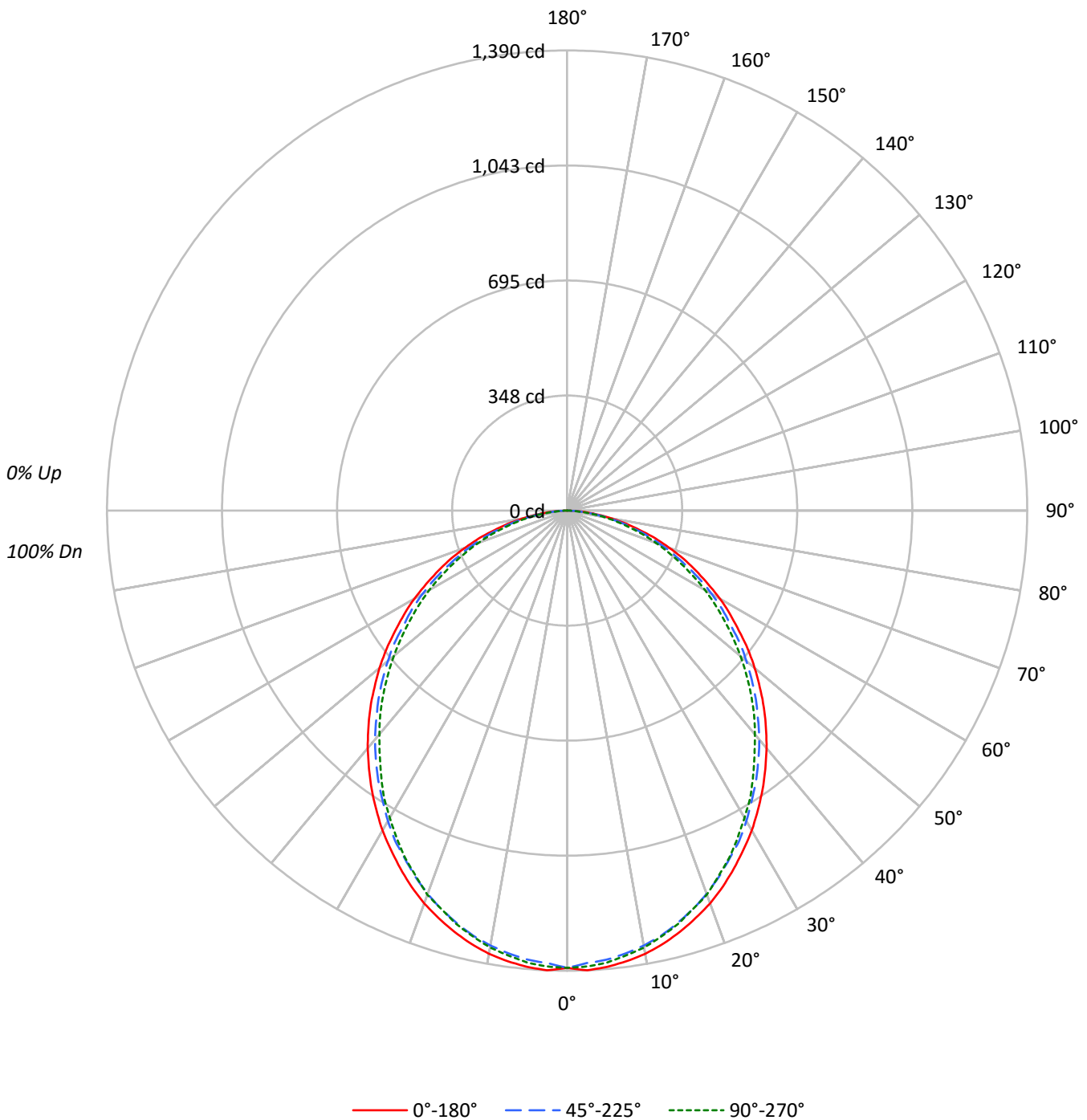
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60					60			
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52					52			
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31					31			
9	57	44	36	31	56	44	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	40922	40922	40922
5°	41152	40510	40775
10°	40900	40133	40325
15°	40408	39549	39666
20°	39808	38843	38922
25°	38983	37940	37855
30°	38175	37043	36649
35°	37224	35979	35426
40°	36254	34923	34134
45°	35215	33774	32919
50°	34092	32567	31506
55°	32741	31093	29972
60°	31591	29926	28563
65°	30042	28072	26642
70°	28285	26180	24751
75°	25987	23800	22186
80°	23069	20885	19367
85°	19072	15604	13870



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.7
10°-20°	366.2	10.4
20°-30°	538.6	15.4
30°-40°	625.4	17.8
40°-50°	623.9	17.8
50°-60°	543.0	15.5
60°-70°	399.9	11.4
70°-80°	222.8	6.4
80°-90°	57.5	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°	1034.9	29.5
0°-40°	1660.3	47.3
0°-60°	2827.2	80.6
0°-90°	3507.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3507.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1381	1381	1381	1381	1381	
5°	1384	1377	1362	1373	1371	131
15°	1317	1307	1289	1298	1293	371
25°	1192	1180	1160	1163	1158	549
35°	1029	1016	995	984	979	644
45°	840	826	806	791	786	648
55°	634	626	602	590	580	569
65°	428	420	400	388	380	425
75°	227	221	208	199	194	242
85°	56	54	46	43	41	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1381.1	1381.1	1381.1	1381.1	1381.1
2.5°	1390.0	1382.4	1368.3	1379.8	1378.5
5°	1383.6	1377.3	1362.0	1373.4	1370.9
7.5°	1373.4	1365.8	1349.2	1359.4	1355.6
10°	1359.4	1351.8	1333.9	1341.6	1340.3
12.5°	1340.3	1331.4	1314.8	1321.2	1317.3
15°	1317.3	1307.1	1289.3	1298.2	1293.1
17.5°	1290.5	1279.1	1262.5	1267.6	1262.5
20°	1262.5	1249.7	1231.9	1237.0	1234.4
22.5°	1229.3	1217.9	1197.5	1200.0	1194.9
25°	1192.4	1179.6	1160.5	1163.0	1157.9
27.5°	1154.1	1142.6	1124.8	1120.9	1114.6
30°	1115.8	1101.8	1082.7	1077.6	1071.2
32.5°	1072.5	1059.7	1038.1	1032.9	1029.1
35°	1029.1	1016.4	994.7	984.5	979.4
37.5°	983.2	970.5	948.8	937.3	929.7
40°	937.3	923.3	902.9	891.4	882.5
42.5°	888.8	876.1	853.1	841.7	835.3
45°	840.4	826.4	806.0	790.7	785.6
47.5°	789.4	776.6	756.2	739.6	734.5
50°	739.6	725.6	706.5	689.9	683.5
52.5°	688.6	675.9	658.0	641.4	631.2
55°	633.8	626.1	601.9	590.4	580.2
57.5°	584.1	575.1	556.0	536.9	530.5
60°	533.1	522.9	505.0	488.4	482.0
62.5°	479.5	471.8	454.0	438.7	429.8
65°	428.5	419.6	400.4	387.7	380.0
67.5°	381.3	369.8	350.7	337.9	331.6
70°	326.5	317.5	302.2	292.0	285.7
72.5°	279.3	269.1	255.0	244.8	238.5
75°	227.0	220.6	207.9	198.9	193.8
77.5°	181.1	172.2	163.2	156.9	153.0
80°	135.2	128.8	122.4	116.0	113.5
82.5°	94.4	89.3	82.9	79.1	75.2
85°	56.1	53.6	45.9	43.4	40.8
87.5°	26.8	23.0	15.3	14.0	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)