

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: P242089

Luminaire Tested: **S121DR-S490D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242089
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-S490D835-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: 1974.8 lumens
Efficiency: N/A
Efficacy: 105.0 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

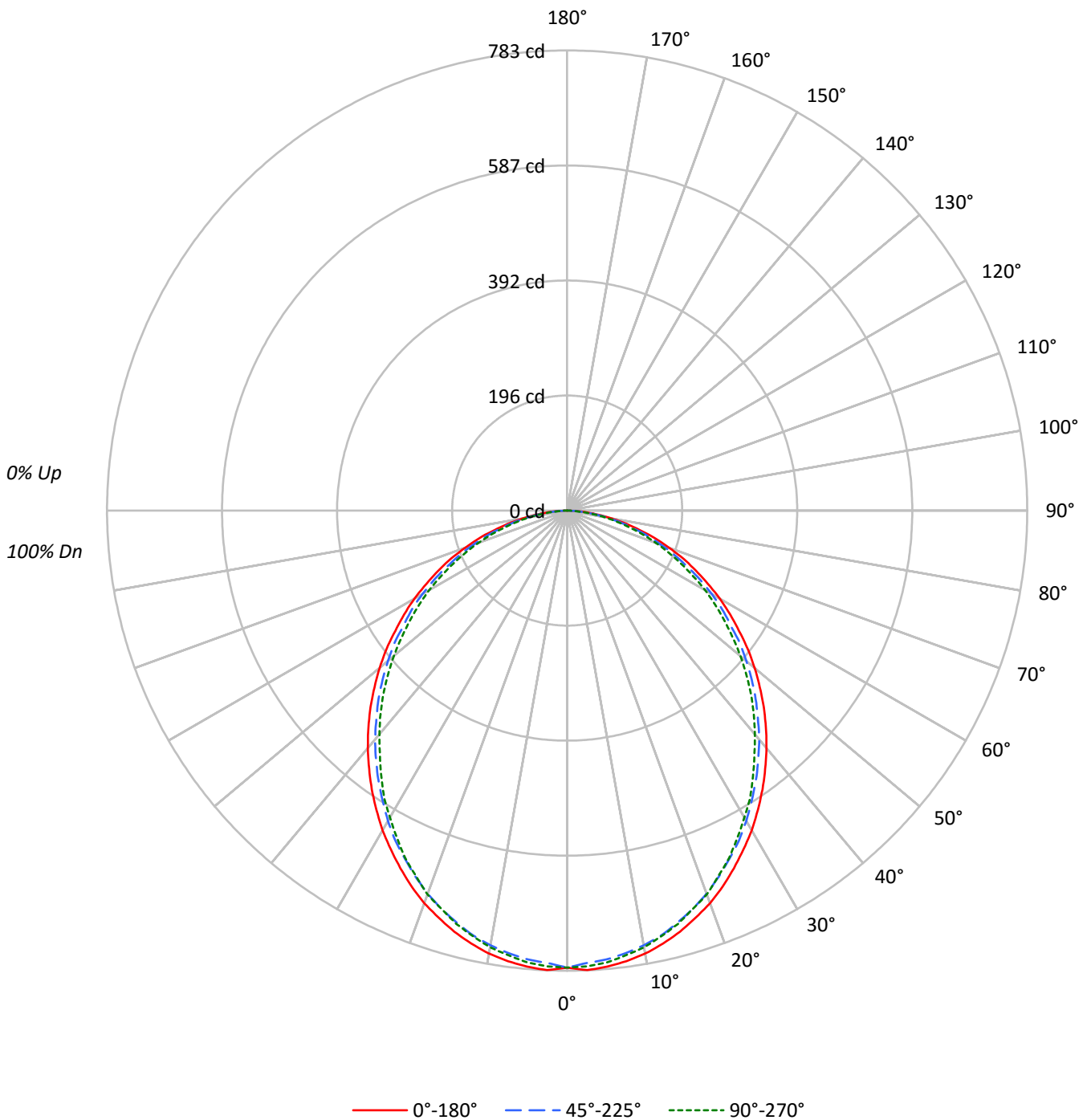
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	23040	23040	23040
5°	23173	22810	22959
10°	23028	22598	22703
15°	22752	22267	22334
20°	22412	21870	21914
25°	21950	21361	21316
30°	21496	20857	20634
35°	20958	20259	19945
40°	20411	19664	19220
45°	19828	19015	18534
50°	19199	18337	17742
55°	18437	17507	16877
60°	17784	16847	16083
65°	16918	15810	15004
70°	15923	14745	13930
75°	14631	13394	12490
80°	12985	11756	10903
85°	10743	8771	7819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.7
10°-20°	206.2	10.4
20°-30°	303.3	15.4
30°-40°	352.1	17.8
40°-50°	351.3	17.8
50°-60°	305.7	15.5
60°-70°	225.2	11.4
70°-80°	125.4	6.4
80°-90°	32.4	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°	582.7	29.5
0°-40°	934.8	47.3
0°-60°	1591.9	80.6
0°-90°	1974.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1974.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	779	776	767	773	772	74
15°	742	736	726	731	728	209
25°	671	664	653	655	652	309
35°	579	572	560	554	551	362
45°	473	465	454	445	442	365
55°	357	353	339	332	327	320
65°	241	236	226	218	214	239
75°	128	124	117	112	109	136
85°	32	30	26	24	23	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	777.6	777.6	777.6	777.6	777.6
2.5°	782.6	778.3	770.4	776.9	776.2
5°	779.1	775.5	766.9	773.3	771.9
7.5°	773.3	769.0	759.7	765.4	763.3
10°	765.4	761.1	751.1	755.4	754.6
12.5°	754.6	749.6	740.3	743.9	741.7
15°	741.7	736.0	725.9	731.0	728.1
17.5°	726.6	720.2	710.8	713.7	710.8
20°	710.8	703.7	693.6	696.5	695.0
22.5°	692.2	685.7	674.2	675.7	672.8
25°	671.4	664.2	653.4	654.8	652.0
27.5°	649.8	643.4	633.3	631.1	627.6
30°	628.3	620.4	609.6	606.7	603.1
32.5°	603.9	596.7	584.5	581.6	579.4
35°	579.4	572.3	560.1	554.3	551.4
37.5°	553.6	546.4	534.2	527.7	523.4
40°	527.7	519.9	508.4	501.9	496.9
42.5°	500.5	493.3	480.4	473.9	470.3
45°	473.2	465.3	453.8	445.2	442.3
47.5°	444.5	437.3	425.8	416.5	413.6
50°	416.5	408.6	397.8	388.5	384.9
52.5°	387.7	380.6	370.5	361.2	355.4
55°	356.9	352.6	338.9	332.4	326.7
57.5°	328.9	323.8	313.1	302.3	298.7
60°	300.1	294.4	284.3	275.0	271.4
62.5°	270.0	265.7	255.6	247.0	242.0
65°	241.3	236.2	225.5	218.3	214.0
67.5°	214.7	208.2	197.5	190.3	186.7
70°	183.8	178.8	170.2	164.4	160.8
72.5°	157.2	151.5	143.6	137.9	134.3
75°	127.8	124.2	117.0	112.0	109.1
77.5°	102.0	96.9	91.9	88.3	86.2
80°	76.1	72.5	68.9	65.3	63.9
82.5°	53.1	50.3	46.7	44.5	42.4
85°	31.6	30.2	25.8	24.4	23.0
87.5°	15.1	12.9	8.6	7.9	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)