

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: P242108

Luminaire Tested: **S121DR-S490D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242108
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-S490D940-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: 1761.0 lumens
Efficiency: N/A
Efficacy: 93.7 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

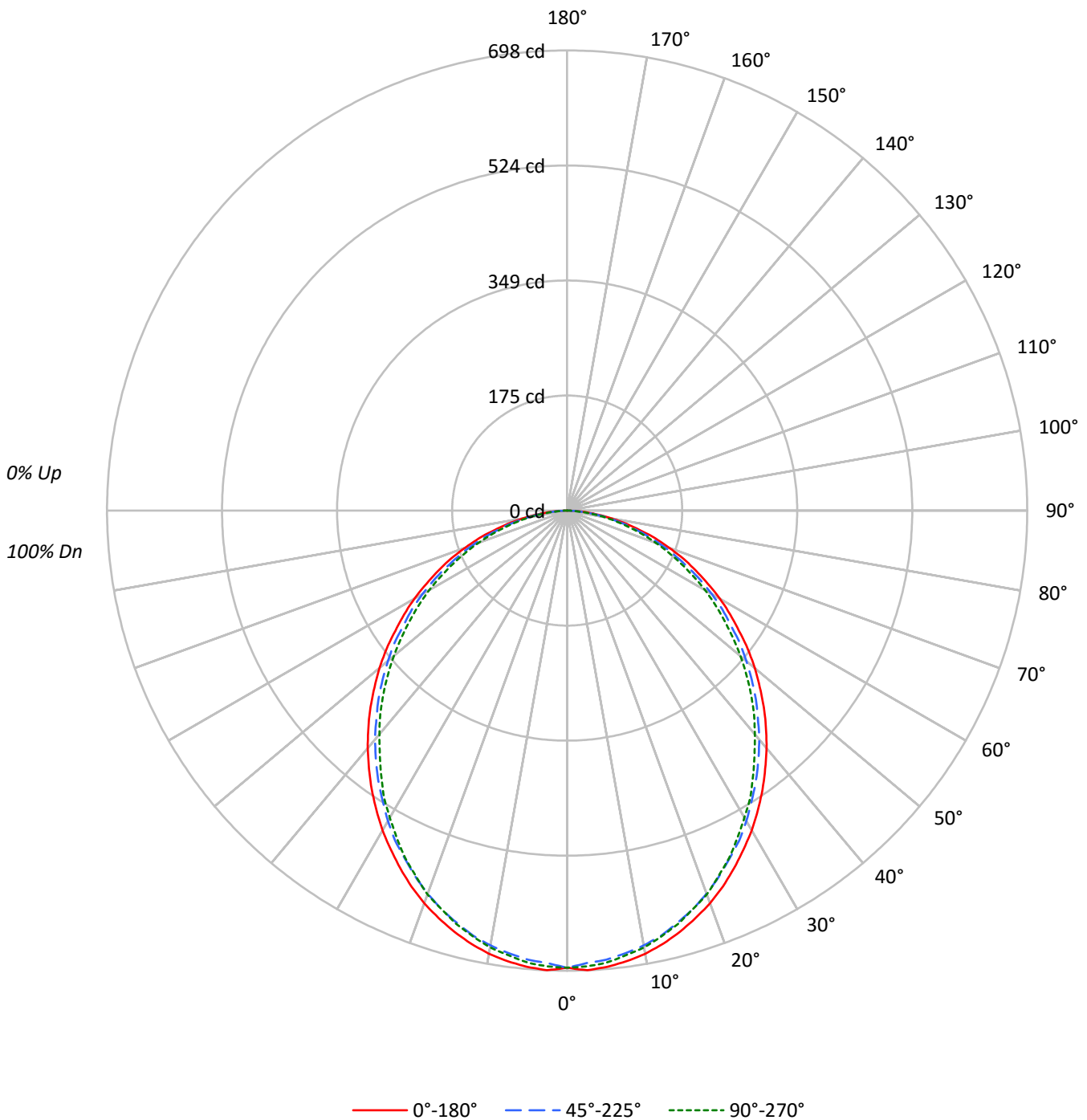
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	20545	20545	20545
5°	20662	20338	20472
10°	20534	20149	20245
15°	20288	19856	19914
20°	19988	19502	19543
25°	19573	19047	19008
30°	19166	18598	18400
35°	18690	18064	17785
40°	18202	17533	17139
45°	17679	16958	16526
50°	17120	16350	15820
55°	16438	15611	15048
60°	15858	15022	14341
65°	15081	14092	13377
70°	14199	13142	12423
75°	13051	11952	11139
80°	11586	10494	9726
85°	9587	7819	6969



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	3.7
10°-20°	183.9	10.4
20°-30°	270.4	15.4
30°-40°	314.0	17.8
40°-50°	313.3	17.8
50°-60°	272.6	15.5
60°-70°	200.8	11.4
70°-80°	111.8	6.4
80°-90°	28.9	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°	519.6	29.5
0°-40°	833.6	47.3
0°-60°	1419.5	80.6
0°-90°	1761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	695	692	684	690	688	66
15°	661	656	647	652	649	186
25°	599	592	583	584	581	276
35°	517	510	499	494	492	323
45°	422	415	405	397	394	325
55°	318	314	302	296	291	285
65°	215	211	201	195	191	214
75°	114	111	104	100	97	122
85°	28	27	23	22	20	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	693.4	693.4	693.4	693.4	693.4
2.5°	697.9	694.1	687.0	692.8	692.1
5°	694.7	691.5	683.8	689.6	688.3
7.5°	689.6	685.7	677.4	682.5	680.6
10°	682.5	678.7	669.7	673.6	672.9
12.5°	672.9	668.4	660.1	663.3	661.4
15°	661.4	656.3	647.3	651.8	649.2
17.5°	648.0	642.2	633.9	636.4	633.9
20°	633.9	627.5	618.5	621.1	619.8
22.5°	617.2	611.5	601.2	602.5	599.9
25°	598.7	592.3	582.6	583.9	581.4
27.5°	579.4	573.7	564.7	562.8	559.6
30°	560.2	553.2	543.6	541.0	537.8
32.5°	538.5	532.1	521.2	518.6	516.7
35°	516.7	510.3	499.4	494.3	491.7
37.5°	493.6	487.2	476.4	470.6	466.8
40°	470.6	463.6	453.3	447.5	443.1
42.5°	446.3	439.9	428.3	422.6	419.4
45°	421.9	414.9	404.7	397.0	394.4
47.5°	396.3	389.9	379.7	371.4	368.8
50°	371.4	364.3	354.7	346.4	343.2
52.5°	345.7	339.3	330.4	322.1	316.9
55°	318.2	314.4	302.2	296.4	291.3
57.5°	293.2	288.8	279.2	269.6	266.4
60°	267.6	262.5	253.5	245.2	242.0
62.5°	240.7	236.9	227.9	220.3	215.8
65°	215.1	210.6	201.0	194.6	190.8
67.5°	191.4	185.7	176.1	169.7	166.5
70°	163.9	159.4	151.7	146.6	143.4
72.5°	140.2	135.1	128.1	122.9	119.7
75°	114.0	110.8	104.4	99.9	97.3
77.5°	90.9	86.4	82.0	78.8	76.8
80°	67.9	64.7	61.5	58.3	57.0
82.5°	47.4	44.8	41.6	39.7	37.8
85°	28.2	26.9	23.0	21.8	20.5
87.5°	13.4	11.5	7.7	7.0	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)