

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: P242098

Luminaire Tested: **S121DR-S490D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242098
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-S490D930-X4F0-XX-UDD-F-W
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1610.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

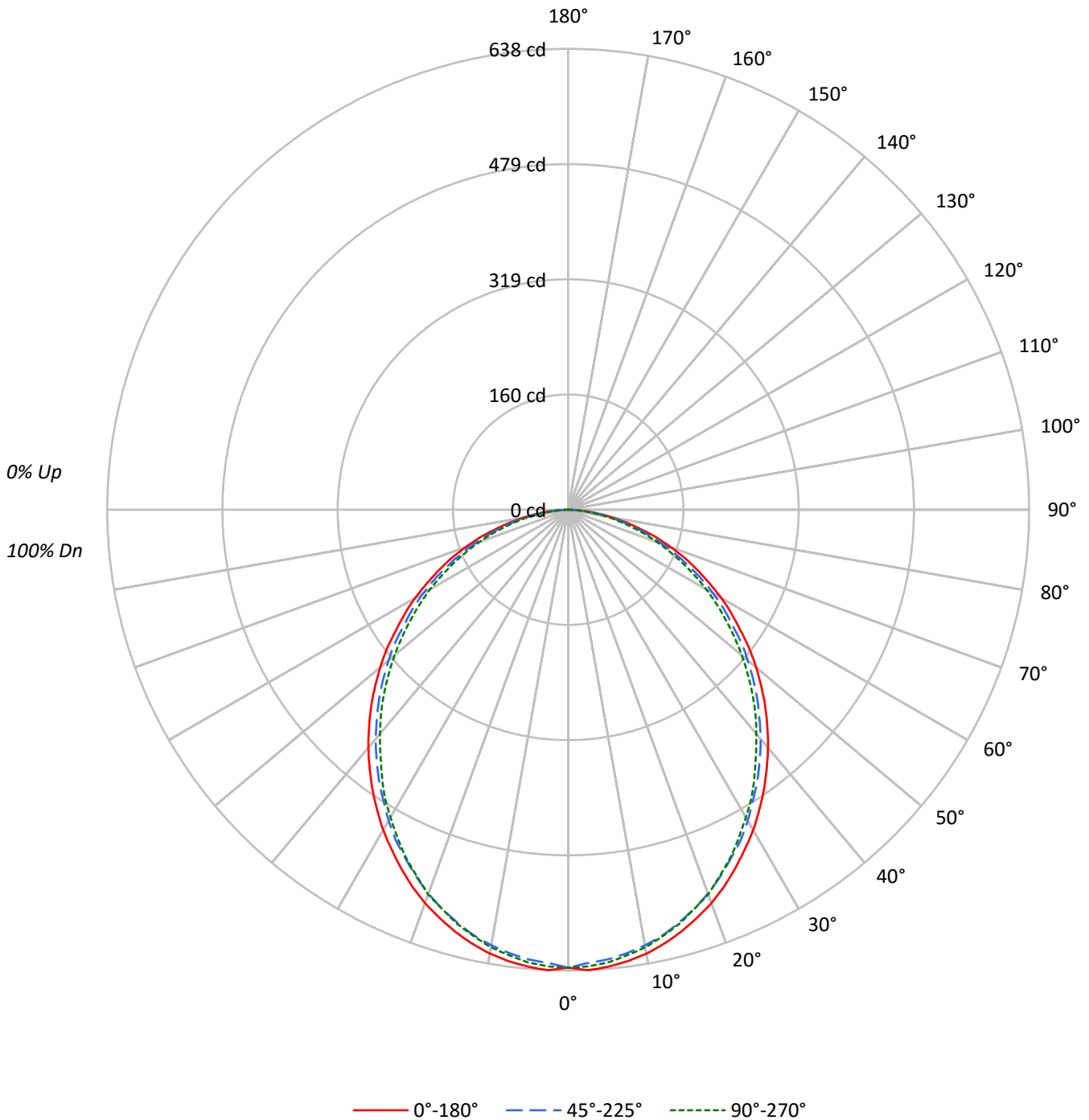
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	18785	18785	18785
5°	18893	18595	18717
10°	18774	18422	18512
15°	18549	18153	18209
20°	18276	17831	17869
25°	17896	17415	17376
30°	17524	17004	16823
35°	17087	16516	16263
40°	16643	16032	15669
45°	16166	15504	15110
50°	15649	14949	14465
55°	15027	14273	13762
60°	14501	13736	13114
65°	13791	12886	12234
70°	12986	12016	11357
75°	11929	10921	10189
80°	10596	9589	8890
85°	8771	7173	6357



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	3.7
10°-20°	168.1	10.4
20°-30°	247.2	15.4
30°-40°	287.1	17.8
40°-50°	286.4	17.8
50°-60°	249.3	15.5
60°-70°	183.6	11.4
70°-80°	102.3	6.4
80°-90°	26.4	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°	475.1	29.5
0°-40°	762.2	47.3
0°-60°	1297.8	80.6
0°-90°	1610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	635	632	625	630	629	60
15°	605	600	592	596	594	170
25°	547	542	533	534	532	252
35°	472	467	457	452	450	295
45°	386	379	370	363	361	297
55°	291	287	276	271	266	261
65°	197	193	184	178	174	195
75°	104	101	95	91	89	111
85°	26	25	21	20	19	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.0	634.0	634.0	634.0	634.0
2.5°	638.1	634.6	628.1	633.4	632.8
5°	635.2	632.2	625.2	630.5	629.3
7.5°	630.5	627.0	619.4	624.0	622.3
10°	624.0	620.5	612.3	615.8	615.3
12.5°	615.3	611.2	603.6	606.5	604.7
15°	604.7	600.0	591.8	595.9	593.6
17.5°	592.4	587.2	579.6	581.9	579.6
20°	579.6	573.7	565.5	567.8	566.7
22.5°	564.3	559.1	549.7	550.9	548.5
25°	547.4	541.5	532.7	533.9	531.5
27.5°	529.8	524.5	516.3	514.6	511.6
30°	512.2	505.8	497.0	494.7	491.7
32.5°	492.3	486.5	476.5	474.2	472.4
35°	472.4	466.6	456.6	451.9	449.6
37.5°	451.3	445.5	435.5	430.3	426.8
40°	430.3	423.8	414.5	409.2	405.1
42.5°	408.0	402.2	391.6	386.4	383.4
45°	385.8	379.3	370.0	363.0	360.6
47.5°	362.4	356.5	347.1	339.5	337.2
50°	339.5	333.1	324.3	316.7	313.8
52.5°	316.1	310.3	302.1	294.5	289.8
55°	290.9	287.4	276.3	271.0	266.4
57.5°	268.1	264.0	255.2	246.5	243.5
60°	244.7	240.0	231.8	224.2	221.3
62.5°	220.1	216.6	208.4	201.4	197.3
65°	196.7	192.6	183.8	178.0	174.5
67.5°	175.0	169.8	161.0	155.1	152.2
70°	149.9	145.8	138.7	134.1	131.1
72.5°	128.2	123.5	117.1	112.4	109.5
75°	104.2	101.3	95.4	91.3	89.0
77.5°	83.1	79.0	74.9	72.0	70.2
80°	62.1	59.1	56.2	53.3	52.1
82.5°	43.3	41.0	38.1	36.3	34.5
85°	25.8	24.6	21.1	19.9	18.7
87.5°	12.3	10.5	7.0	6.4	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)