

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: P199464

Luminaire Tested: **S123-DIW-ULO-LO-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199464
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27889 P27889)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123-DIW-ULO-LO-40-0048-1D-UDD-1-NA-W
Description: DEFINE 3-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-4000K, NO LENS
DOWNLIGHT LLO-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

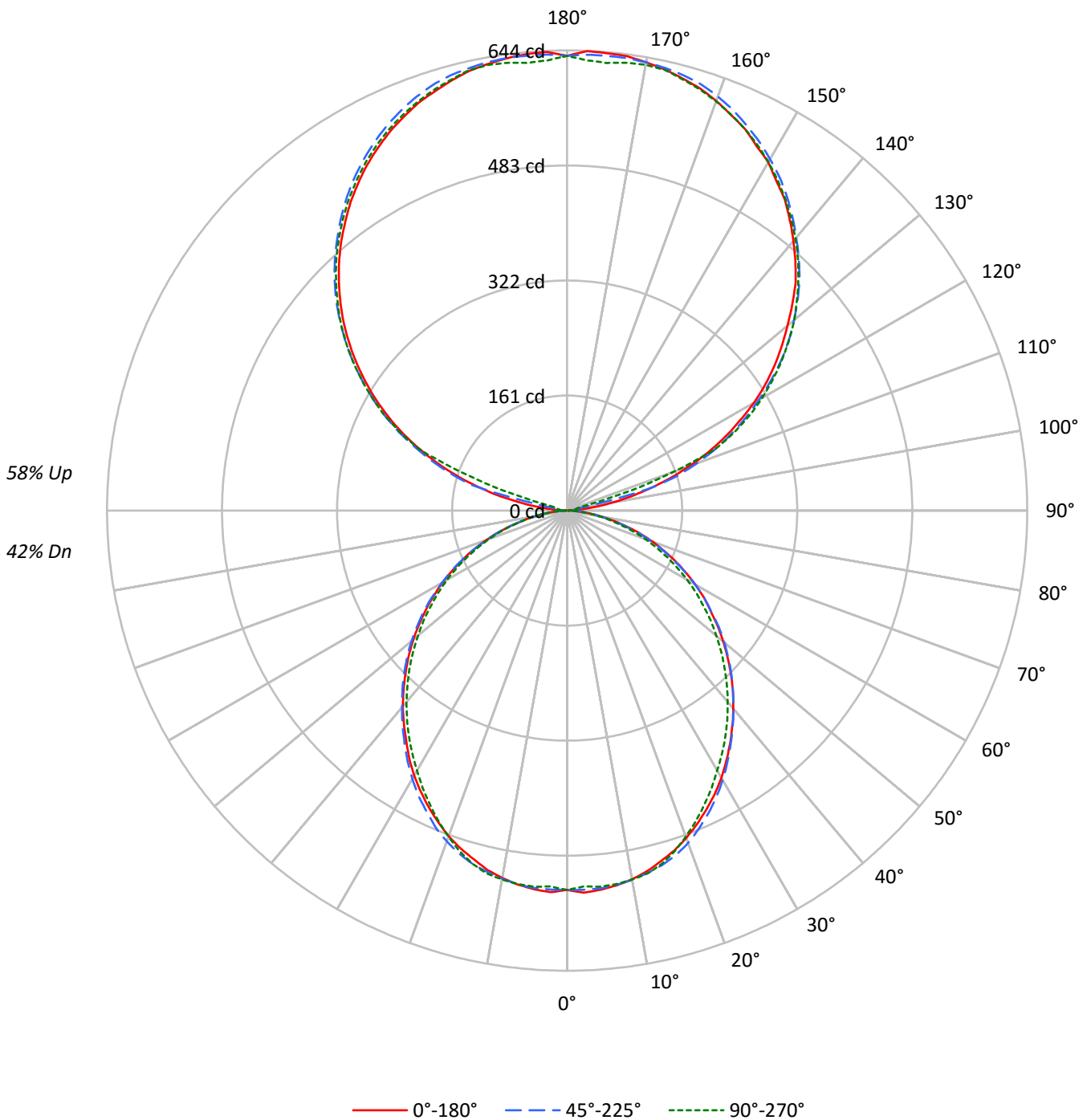
Lumens per Lamp: N/A
Luminaire Lumens: 3279.7 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.32
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 26.9
Input Voltage (V): NR
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	42	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25
4	73	62	55	49	66	57	50	45	48	42	38	39	35	32	30	28	26	22
5	67	55	47	42	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	23	20	17	15
8	53	41	33	28	48	37	31	26	32	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5598	5598	5598
5°	5593	4943	5586
10°	5520	4439	5501
15°	5409	3984	5381
20°	5292	3525	5264
25°	5147	3110	5113
30°	4993	2740	4950
35°	4808	2424	4749
40°	4624	2131	4571
45°	4428	1859	4362
50°	4217	1604	4156
55°	3982	1362	3915
60°	3768	1138	3653
65°	3479	914	3341
70°	3119	697	2957
75°	2615	480	2424
80°	1956	287	1749
85°	1110	123	980



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.3	1.5
10°-20°	143.7	4.4
20°-30°	212.4	6.5
30°-40°	247.2	7.5
40°-50°	248.0	7.6
50°-60°	217.1	6.6
60°-70°	160.4	4.9
70°-80°	87.6	2.7
80°-90°	22.6	0.7
90°-100°	14.8	0.5
100°-110°	104.8	3.2
110°-120°	250.7	7.6
120°-130°	324.5	9.9
130°-140°	352.2	10.7
140°-150°	333.4	10.2
150°-160°	272.3	8.3
160°-170°	176.9	5.4
170°-180°	60.7	1.9
0°-30°	406.4	12.4
0°-40°	653.6	19.9
0°-60°	1118.7	34.1
0°-90°	1389.3	42.4
90°-120°	370.3	11.3
90°-150°	1380.4	42.1
90°-180°	1890.0	57.6
0°-180°	3279.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	531	531	531	531	531	
5°	533	531	528	530	532	51
15°	508	514	512	512	505	143
25°	461	468	454	465	458	213
35°	398	399	386	397	393	249
45°	324	325	312	323	319	250
55°	245	246	233	244	241	220
65°	167	165	154	161	160	165
75°	86	84	78	80	80	92
85°	19	20	18	18	17	22
90°	1	2	2	2	1	2
95°	19	8	9	9	23	25
105°	120	118	18	138	130	128
115°	244	254	256	260	252	240
125°	354	366	367	367	360	316
135°	452	460	458	460	452	348
145°	531	536	532	537	528	332
155°	589	595	589	595	586	271
165°	626	631	625	631	623	177
175°	642	639	629	639	641	61
180°	636	636	636	636	636	



TEST NUMBER: P199464

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	530.9	530.9	530.9	530.9	530.9	530.9	530.9	530.9	530.9
2.5°	535.3	529.8	531.3	530.5	526.5	530.5	530.9	529.4	534.6
5°	532.7	527.9	530.9	529.8	528.3	529.8	530.2	527.2	532.0
7.5°	529.1	525.0	528.3	527.9	527.2	527.9	527.6	523.5	527.9
10°	523.9	520.2	524.6	525.4	524.3	525.0	523.2	519.1	522.1
12.5°	516.9	513.9	519.5	520.9	520.2	520.6	518.0	512.1	515.1
15°	507.7	506.2	513.6	514.7	511.7	513.6	511.7	504.4	505.1
17.5°	498.8	497.4	505.5	504.0	499.9	502.9	503.3	495.2	495.9
20°	487.4	486.7	495.2	490.7	485.6	489.3	492.6	484.5	484.8
22.5°	474.9	475.6	481.9	475.6	470.5	474.2	480.4	472.7	471.9
25°	461.3	463.5	467.5	460.2	454.3	458.3	464.9	460.5	458.3
27.5°	447.3	450.6	452.1	443.6	437.7	441.7	450.2	447.3	443.6
30°	431.8	435.8	435.5	426.6	420.0	424.4	433.3	432.9	428.1
32.5°	414.8	420.4	417.4	408.9	403.4	406.7	415.6	416.7	411.2
35°	397.5	403.4	399.0	390.9	386.1	389.4	396.8	400.1	392.7
37.5°	379.8	385.7	380.6	372.8	368.1	371.4	378.4	382.4	375.4
40°	361.8	367.3	362.2	355.5	349.6	353.3	359.6	364.0	357.7
42.5°	343.4	349.3	343.7	337.1	330.8	335.6	341.2	345.6	338.9
45°	324.2	330.5	325.3	317.6	311.7	316.5	322.7	326.4	319.4
47.5°	304.7	312.1	306.2	298.1	292.2	296.9	303.6	307.3	300.6
50°	285.2	291.4	287.0	278.5	272.6	277.1	284.4	287.4	281.1
52.5°	265.3	272.6	267.5	259.0	253.5	257.2	264.2	267.5	260.8
55°	245.0	250.9	246.1	239.1	232.8	237.3	243.9	246.1	240.9
57.5°	227.3	231.7	227.3	219.6	213.7	217.0	223.3	226.2	221.1
60°	207.1	211.1	206.7	199.3	194.2	197.1	202.3	205.9	200.8
62.5°	186.8	190.8	185.7	179.1	174.3	177.6	182.0	185.3	180.5
65°	166.9	170.6	165.1	159.2	154.4	157.7	161.0	164.7	160.3
67.5°	146.6	149.9	144.8	138.9	134.8	137.4	140.4	144.1	140.4
70°	126.7	129.3	124.9	119.4	115.7	117.9	120.5	123.4	120.1
72.5°	106.8	110.2	104.6	100.2	96.9	97.6	100.6	102.8	100.2
75°	86.2	88.4	84.4	80.7	77.7	78.5	79.6	82.9	79.9
77.5°	67.1	69.6	66.3	63.0	60.8	61.5	61.9	64.1	61.2
80°	49.0	51.2	49.0	46.4	44.9	45.3	45.3	46.8	43.8
82.5°	32.8	35.0	33.5	31.7	31.3	30.6	30.6	31.7	28.7
85°	18.8	21.4	20.3	18.8	18.4	18.1	18.1	18.8	16.6
87.5°	8.5	10.3	9.2	8.1	7.4	7.0	7.0	8.1	6.3
90°	1.1	2.6	2.2	1.5	1.5	1.5	1.8	2.2	0.7
92.5°	4.1	4.8	4.8	4.8	4.8	5.5	5.9	5.9	7.0
95°	18.8	7.0	8.1	8.8	9.2	9.2	8.8	7.7	22.8
97.5°	39.1	30.9	9.9	11.1	11.8	11.4	10.7	39.4	44.2
100°	63.4	71.8	11.1	12.5	13.3	12.9	12.2	80.7	70.0
102.5°	90.3	100.2	39.8	14.0	14.4	14.0	60.8	108.7	99.8
105°	120.5	128.9	118.3	23.6	18.1	28.7	138.5	137.4	130.4
107.5°	151.1	159.5	161.4	104.6	94.7	109.8	169.5	167.3	162.1
110°	182.4	188.6	192.7	194.5	158.8	197.1	199.7	196.7	192.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	213.7	220.3	224.0	226.6	223.6	228.4	229.2	226.2	222.2
115°	243.9	249.8	253.5	257.5	256.4	258.3	259.7	255.7	252.0
117.5°	272.3	279.6	281.8	285.9	287.4	285.9	287.4	284.1	280.7
120°	302.1	308.0	309.5	313.2	315.0	312.8	314.6	311.7	308.0
122.5°	329.0	334.2	337.8	339.3	341.2	338.6	340.8	337.5	334.2
125°	354.4	359.9	365.5	365.1	366.9	364.0	366.6	362.5	359.6
127.5°	378.7	384.3	390.9	389.8	391.3	388.3	391.6	386.8	384.3
130°	402.3	408.9	414.8	413.4	414.8	412.3	415.2	410.8	408.2
132.5°	427.7	434.0	437.7	436.2	436.2	434.7	438.8	434.0	430.3
135°	452.1	456.1	459.8	457.6	457.6	456.1	460.5	456.1	451.7
137.5°	472.7	477.1	479.7	478.2	478.2	476.4	480.8	476.7	472.3
140°	492.6	496.6	498.8	497.0	497.0	495.5	499.9	496.6	491.8
142.5°	512.1	515.8	518.0	515.1	515.1	513.6	519.1	515.4	509.9
145°	531.3	533.8	536.4	532.0	532.4	530.2	536.8	533.1	527.9
147.5°	545.6	550.4	553.4	548.2	548.2	546.4	553.4	549.7	543.8
150°	562.9	564.8	568.1	563.7	563.3	561.8	568.5	564.4	559.3
152.5°	574.7	579.2	582.1	577.3	576.9	575.1	582.5	578.1	572.9
155°	589.1	590.9	594.6	590.2	589.1	588.4	595.4	589.8	585.8
157.5°	599.4	601.6	606.8	602.7	599.8	600.9	606.4	600.2	596.8
160°	610.1	610.8	616.7	612.7	609.4	610.8	616.4	608.6	607.5
162.5°	619.3	619.7	625.2	620.4	617.8	618.2	624.8	617.1	615.3
165°	625.9	625.2	630.7	626.7	624.8	624.8	630.7	623.7	623.4
167.5°	632.2	631.8	634.4	631.8	631.5	629.6	634.1	629.3	630.4
170°	637.0	635.5	637.0	633.3	633.3	631.5	637.4	633.3	634.8
172.5°	641.4	638.5	638.5	633.3	632.2	631.8	638.8	636.6	638.8
175°	642.5	639.9	638.8	633.3	628.9	632.2	639.2	637.7	641.4
177.5°	643.6	639.6	638.5	631.8	630.7	631.1	638.8	638.1	642.5
180°	636.3	636.3	636.3	636.3	636.3	636.3	636.3	636.3	636.3

(END OF REPORT)