

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: P199518

Luminaire Tested: **S124-DIW-ULO-LO-40-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199518
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28061)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIW-ULO-LO-40-0048-1D-UDD-1-NA-W
Description: DEFINE 4-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

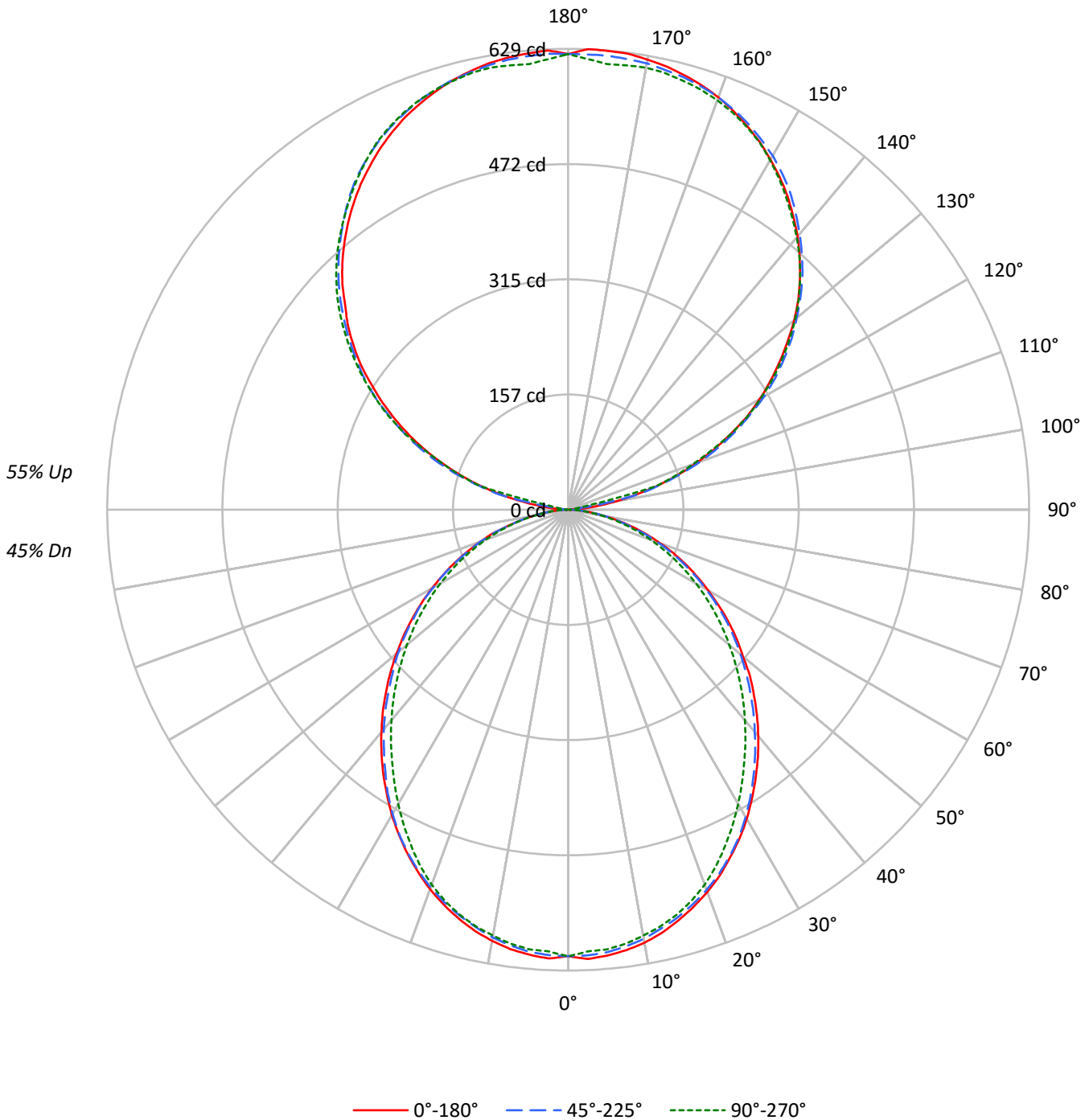
Lumens per Lamp: N/A
Luminaire Lumens: 3375.4 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

Input Watts (W): 26.9
Input Voltage (V): NR
Input Current (Ain): 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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	89	85	88	85	82	79	71	68	66	58	56	54	45	44	43	38
2	88	81	75	70	80	74	69	65	62	58	55	51	48	46	40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	74	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23
5	68	56	48	42	62	52	45	39	43	38	34	36	32	29	29	26	24	20
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	26	23	21	18
7	57	45	37	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	25	45	35	28	24	30	24	21	25	21	18	20	17	15	13
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4819	4819	4819
5°	4810	4354	4802
10°	4743	3955	4722
15°	4639	3600	4616
20°	4521	3251	4489
25°	4378	2899	4338
30°	4227	2568	4173
35°	4047	2262	3990
40°	3867	1992	3799
45°	3672	1743	3601
50°	3452	1508	3391
55°	3256	1290	3170
60°	3012	1081	2926
65°	2770	877	2661
70°	2463	675	2347
75°	2071	474	1921
80°	1554	289	1455
85°	912	128	863



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.7
10°-20°	161.7	4.8
20°-30°	236.9	7.0
30°-40°	271.6	8.0
40°-50°	267.7	7.9
50°-60°	230.8	6.8
60°-70°	168.3	5.0
70°-80°	91.8	2.7
80°-90°	24.1	0.7
90°-100°	15.9	0.5
100°-110°	125.7	3.7
110°-120°	243.3	7.2
120°-130°	316.3	9.4
130°-140°	343.4	10.2
140°-150°	324.9	9.6
150°-160°	265.1	7.9
160°-170°	171.6	5.1
170°-180°	59.0	1.7
0°-30°	456.0	13.5
0°-40°	727.6	21.6
0°-60°	1226.1	36.3
0°-90°	1510.2	44.7
90°-120°	384.9	11.4
90°-150°	1369.5	40.6
90°-180°	1865.0	55.3
0°-180°	3375.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	609	609	609	609	609	
5°	611	606	602	606	610	58
15°	581	576	572	573	578	164
25°	523	522	507	517	518	241
35°	446	441	419	435	440	279
45°	358	351	331	345	352	277
55°	267	263	244	257	260	238
65°	177	173	160	169	170	175
75°	91	88	81	84	84	97
85°	21	21	20	20	20	23
90°	1	2	1	2	1	2
95°	22	6	6	6	20	27
105°	125	129	123	126	122	132
115°	244	250	245	247	238	242
125°	352	360	355	352	346	315
135°	447	452	448	443	436	345
145°	522	528	519	521	511	326
155°	578	581	577	576	568	266
165°	614	611	606	608	607	173
175°	628	622	610	622	625	60
180°	622	622	622	622	622	



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CATALOG NUMBER: S124-DIW-ULO-LO-40-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4
2.5°	613.8	606.8	609.0	607.5	603.5	607.5	608.6	606.4	613.1
5°	610.8	604.2	606.4	604.2	602.4	603.8	605.7	603.1	609.7
7.5°	606.4	599.4	601.3	599.4	597.6	599.1	600.2	597.9	604.9
10°	600.2	592.8	594.6	592.4	590.2	591.7	592.8	590.6	597.6
12.5°	591.3	584.3	585.8	584.3	582.5	582.8	583.6	581.4	588.7
15°	580.6	573.6	576.2	574.7	572.2	573.6	573.3	570.7	577.7
17.5°	568.5	561.8	564.8	563.3	559.6	561.8	561.8	557.8	565.2
20°	555.2	548.2	552.3	548.6	544.5	546.7	548.6	543.8	551.2
22.5°	540.5	533.1	537.9	531.3	526.8	529.4	533.8	528.7	535.3
25°	523.2	517.3	521.7	512.5	506.6	510.3	517.3	512.1	518.4
27.5°	506.2	500.3	504.0	493.7	485.6	490.4	499.2	494.8	500.3
30°	487.4	482.6	484.5	472.3	463.8	469.0	479.3	476.7	481.2
32.5°	466.8	463.1	463.1	450.2	441.4	447.3	458.3	457.6	460.5
35°	446.2	443.9	441.4	427.4	418.9	424.4	435.1	438.1	439.9
37.5°	425.2	423.7	418.9	405.3	397.2	403.1	413.0	417.4	418.5
40°	403.4	402.7	396.1	383.2	375.1	380.9	391.3	396.8	396.4
42.5°	381.3	382.1	373.9	361.4	353.3	359.2	368.8	376.2	374.3
45°	358.5	360.7	351.1	339.7	331.2	337.5	345.2	354.4	351.5
47.5°	336.4	338.9	329.0	317.2	309.1	315.7	323.5	333.4	329.0
50°	311.3	316.5	306.9	295.1	287.0	293.3	302.5	310.9	305.8
52.5°	289.6	293.3	284.8	273.4	265.6	270.8	280.0	288.5	282.9
55°	267.1	271.2	262.7	251.3	243.9	249.1	257.2	265.6	260.1
57.5°	243.5	247.6	239.8	229.5	222.5	228.1	236.5	242.4	237.3
60°	220.7	225.8	217.4	207.4	201.5	205.9	212.6	219.6	214.4
62.5°	198.6	203.4	195.3	186.1	180.5	184.6	191.6	197.1	192.3
65°	177.2	180.2	173.2	164.7	159.9	162.5	168.7	175.0	170.2
67.5°	155.5	158.4	151.4	144.1	139.3	141.8	147.0	152.9	148.5
70°	133.4	135.9	130.1	123.4	119.4	121.9	126.7	131.2	127.1
72.5°	112.4	114.2	108.7	103.5	100.6	102.4	105.7	109.8	107.9
75°	91.0	93.2	87.7	83.3	80.7	81.4	84.0	87.3	84.4
77.5°	70.7	72.9	68.5	65.2	63.7	64.1	65.9	68.5	64.8
80°	51.9	53.8	51.2	48.3	46.8	47.5	48.6	50.1	48.6
82.5°	35.0	36.8	35.0	33.2	32.1	32.8	33.2	33.9	32.8
85°	20.6	22.1	21.0	19.9	19.5	19.5	19.9	20.6	19.5
87.5°	9.2	10.3	9.6	8.8	7.7	8.1	8.5	9.2	8.5
90°	0.7	1.8	1.5	1.1	1.1	1.1	1.5	1.8	0.7
92.5°	7.0	3.7	3.7	3.7	3.7	3.7	3.7	4.1	4.8
95°	21.7	14.0	5.5	5.9	5.9	5.9	5.9	9.6	19.5
97.5°	42.4	49.4	10.7	7.0	7.0	7.0	10.7	46.8	39.4
100°	67.1	73.7	53.8	16.9	12.5	15.8	47.2	69.6	63.7
102.5°	94.7	103.2	99.1	55.6	32.1	47.5	96.2	98.7	92.1
105°	125.3	132.6	128.6	130.4	123.4	125.6	125.6	127.1	121.6
107.5°	155.5	161.7	159.5	158.1	152.5	154.0	157.7	156.9	150.7
110°	185.7	191.9	191.9	187.2	180.5	183.1	189.0	185.3	180.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	215.9	220.7	221.8	219.2	211.5	215.2	218.5	212.6	209.3
115°	244.3	251.3	250.5	250.9	245.4	245.4	247.2	242.8	238.0
117.5°	274.8	280.0	278.9	279.3	275.6	274.1	273.7	270.8	265.6
120°	301.7	307.6	308.4	305.8	303.2	300.3	302.1	298.1	292.5
122.5°	327.2	333.8	334.9	332.3	329.7	326.4	327.9	323.5	318.3
125°	352.2	359.6	359.6	357.7	355.2	351.8	351.5	347.8	345.9
127.5°	377.3	385.7	384.3	382.4	380.2	376.5	374.7	372.5	369.5
130°	402.7	408.6	407.1	405.6	404.2	399.7	398.3	396.1	392.7
132.5°	425.9	429.2	429.9	427.0	427.0	421.5	421.1	418.5	412.6
135°	447.3	450.6	452.1	447.6	447.6	442.1	443.2	439.5	435.8
137.5°	467.5	470.1	471.9	466.8	467.2	462.0	463.8	457.6	456.1
140°	487.1	488.2	491.5	485.9	485.2	480.8	483.4	477.1	475.3
142.5°	504.4	505.8	509.9	504.0	502.2	498.8	502.2	494.4	493.3
145°	522.1	522.4	528.3	521.3	519.1	516.5	520.6	511.4	510.6
147.5°	537.5	536.8	543.8	537.9	535.7	533.1	537.5	526.8	526.8
150°	551.9	551.2	557.8	553.0	550.8	548.6	551.2	541.2	541.2
152.5°	565.9	563.3	569.9	565.9	565.2	561.8	564.1	554.5	555.9
155°	577.7	575.1	581.4	578.1	576.6	574.0	575.5	566.3	568.5
157.5°	589.1	585.1	590.6	589.1	586.5	585.1	585.1	577.7	580.3
160°	599.1	594.3	599.1	596.8	594.6	592.8	594.3	586.9	590.2
162.5°	607.2	602.7	605.3	602.4	601.3	598.3	601.3	595.4	599.1
165°	613.8	609.0	610.8	606.8	606.1	603.8	607.5	603.5	607.2
167.5°	619.7	615.3	614.5	610.5	610.5	607.5	611.9	609.7	613.4
170°	623.7	620.1	618.6	612.7	612.7	610.1	616.4	614.5	618.9
172.5°	627.8	623.0	620.4	614.2	611.6	611.9	619.7	618.2	622.6
175°	628.5	624.8	621.9	615.3	610.5	613.8	621.5	621.9	625.2
177.5°	629.3	625.6	621.9	616.4	615.6	614.9	623.0	622.6	627.4
180°	621.9	621.9	621.9	621.9	621.9	621.9	621.9	621.9	621.9

(END OF REPORT)