

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: P199506

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199506
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-1-40-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-4000K, NO LENS
DOWNLIGHT LL1-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

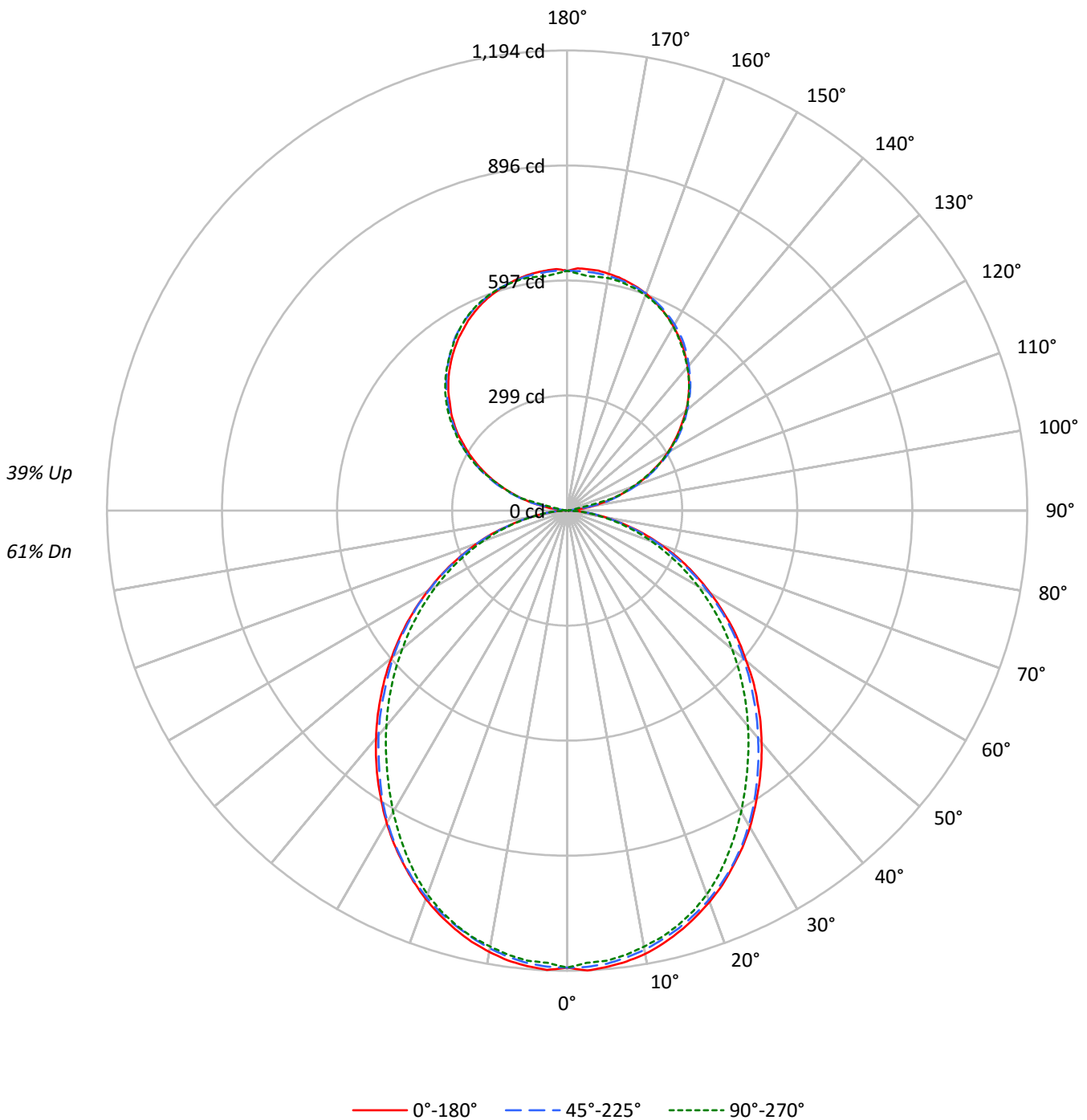
Lumens per Lamp: N/A
Luminaire Lumens: 4804.3 lumens
Efficiency: N/A
Efficacy: 119.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

Input Watts (W): 40.1
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	110	110	110	110	103	103	103	103	90	90	90	77	77	77	66	66	66	61
1	100	96	92	89	94	90	87	84	79	76	74	68	67	65	59	58	56	52
2	92	84	78	73	85	79	73	69	69	65	61	60	57	54	52	50	48	44
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	51	71	62	55	49	54	49	44	48	43	40	41	38	35	32
5	70	59	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28
6	65	53	44	38	61	50	42	37	44	38	34	39	34	30	34	30	27	24
7	60	48	40	34	56	45	38	32	40	34	30	35	30	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	28	25	22	19
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9378	9378	9378
5°	9362	8472	9345
10°	9230	7697	9190
15°	9029	7005	8983
20°	8799	6327	8735
25°	8519	5643	8441
30°	8226	4997	8120
35°	7876	4402	7766
40°	7525	3876	7395
45°	7146	3393	7006
50°	6719	2936	6599
55°	6336	2510	6170
60°	5861	2104	5694
65°	5392	1706	5178
70°	4791	1313	4568
75°	4030	923	3737
80°	3027	562	2833
85°	1780	249	1682



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	2.3
10°-20°	314.8	6.6
20°-30°	461.1	9.6
30°-40°	528.5	11.0
40°-50°	521.0	10.8
50°-60°	449.1	9.3
60°-70°	327.4	6.8
70°-80°	178.6	3.7
80°-90°	46.9	1.0
90°-100°	16.1	0.3
100°-110°	125.7	2.6
110°-120°	243.3	5.1
120°-130°	316.3	6.6
130°-140°	343.4	7.1
140°-150°	324.9	6.8
150°-160°	265.1	5.5
160°-170°	171.6	3.6
170°-180°	59.0	1.2
0°-30°	887.5	18.5
0°-40°	1416.0	29.5
0°-60°	2386.1	49.7
0°-90°	2939.0	61.2
90°-120°	385.0	8.0
90°-150°	1369.7	28.5
90°-180°	1865.0	38.8
0°-180°	4804.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1189	1180	1172	1179	1187	113
15°	1130	1121	1114	1116	1124	318
25°	1018	1015	986	1007	1009	469
35°	868	859	815	847	856	543
45°	698	683	645	672	684	538
55°	520	511	475	500	506	464
65°	345	337	311	328	331	341
75°	177	171	157	164	164	188
85°	40	41	38	39	38	46
90°	1	3	2	3	1	4
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-1-40-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9	1185.9
2.5°	1194.5	1180.9	1185.2	1182.3	1174.4	1182.3	1184.5	1180.2	1193.1
5°	1188.8	1175.9	1180.2	1175.9	1172.3	1175.1	1178.7	1173.7	1186.6
7.5°	1180.2	1166.5	1170.1	1166.5	1163.0	1165.8	1168.0	1163.7	1177.3
10°	1168.0	1153.6	1157.2	1152.9	1148.6	1151.5	1153.6	1149.3	1163.0
12.5°	1150.8	1137.1	1140.0	1137.1	1133.6	1134.3	1135.7	1131.4	1145.7
15°	1130.0	1116.3	1121.4	1118.5	1113.5	1116.3	1115.6	1110.6	1124.2
17.5°	1106.3	1093.4	1099.1	1096.3	1089.1	1093.4	1093.4	1085.5	1099.9
20°	1080.5	1066.9	1074.8	1067.6	1059.7	1064.0	1067.6	1058.3	1072.6
22.5°	1051.8	1037.5	1046.8	1033.9	1025.3	1030.3	1038.9	1028.9	1041.8
25°	1018.1	1006.6	1015.3	997.3	985.9	993.0	1006.6	996.6	1008.8
27.5°	985.1	973.7	980.8	960.8	945.0	954.3	971.5	962.9	973.7
30°	948.6	939.3	942.8	919.2	902.7	912.7	932.8	927.8	936.4
32.5°	908.4	901.3	901.3	876.2	858.9	870.4	891.9	890.5	896.2
35°	868.3	864.0	858.9	831.7	815.2	826.0	846.8	852.5	856.1
37.5°	827.4	824.5	815.2	788.7	772.9	784.4	803.7	812.3	814.5
40°	785.1	783.7	770.8	745.7	729.9	741.4	761.4	772.2	771.5
42.5°	742.1	743.5	727.7	703.4	687.6	699.1	717.7	732.0	728.5
45°	697.6	701.9	683.3	661.1	644.6	656.8	671.8	689.7	684.0
47.5°	654.6	659.6	640.3	617.3	601.6	614.5	629.5	648.9	640.3
50°	605.9	615.9	597.2	574.3	558.5	570.7	588.6	605.1	595.1
52.5°	563.6	570.7	554.2	532.0	516.9	527.0	544.9	561.4	550.6
55°	519.8	527.7	511.2	489.0	474.6	484.7	500.5	516.9	506.2
57.5°	473.9	481.8	466.8	446.7	433.1	443.8	460.3	471.8	461.7
60°	429.5	439.5	423.0	403.7	392.2	400.8	413.7	427.3	417.3
62.5°	386.5	395.8	380.0	362.1	351.3	359.2	372.8	383.6	374.3
65°	344.9	350.6	337.0	320.5	311.2	316.2	328.4	340.6	331.2
67.5°	302.6	308.3	294.7	280.3	271.0	276.0	286.1	297.5	288.9
70°	259.5	264.6	253.1	240.2	232.3	237.3	246.6	255.2	247.4
72.5°	218.7	222.3	211.5	201.5	195.7	199.3	205.8	213.7	210.1
75°	177.1	181.4	170.6	162.0	157.0	158.5	163.5	169.9	164.2
77.5°	137.7	142.0	133.4	126.9	124.0	124.8	128.3	133.4	126.2
80°	101.1	104.7	99.7	93.9	91.1	92.5	94.6	97.5	94.6
82.5°	68.1	71.7	68.1	64.5	62.4	63.8	64.5	66.0	63.8
85°	40.2	43.0	40.9	38.7	38.0	38.0	38.7	40.2	38.0
87.5°	17.9	20.1	18.6	17.2	15.1	15.8	16.5	17.9	16.5
90°	1.4	3.6	2.9	2.2	2.2	2.2	2.9	3.6	1.4
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)