

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: P199502

Luminaire Tested: **S124-DIW-ULO-1-30-0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199502
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-1-30-0048-1D-UDD-1-NA-W
Description: DEFINE 4-INCH DIRECT/INDIRECT WALL LED LUMINAIRE
UPLIGHT LLO-3000K, NO LENS
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

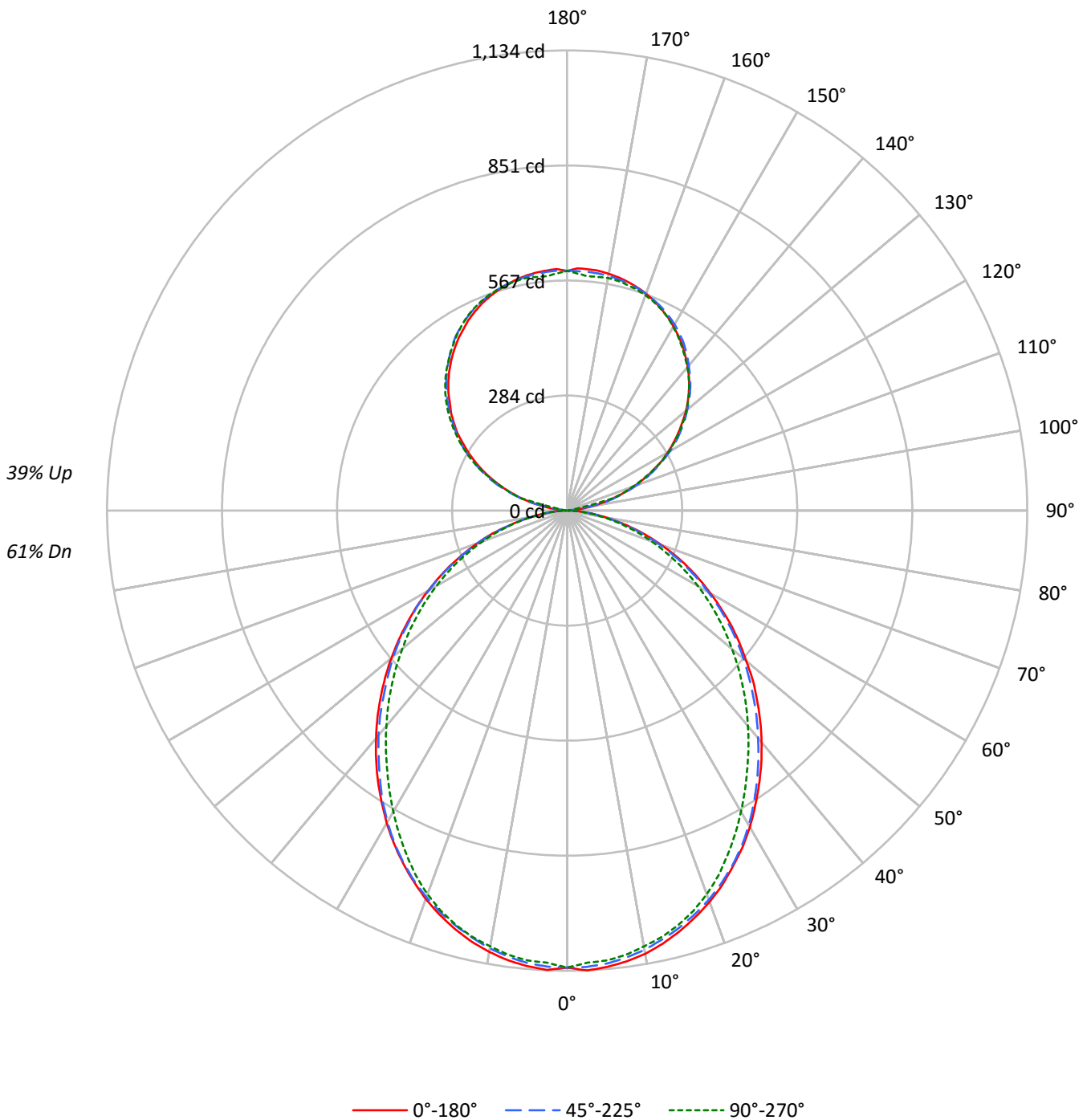
Lumens per Lamp: N/A
Luminaire Lumens: 4562.0 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: Semi-Direct

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°	8906	8906	8906
5°	8890	8045	8874
10°	8764	7309	8727
15°	8574	6651	8530
20°	8355	6009	8294
25°	8090	5358	8015
30°	7811	4745	7711
35°	7479	4180	7374
40°	7146	3681	7022
45°	6785	3221	6653
50°	6380	2788	6267
55°	6016	2384	5859
60°	5565	1998	5407
65°	5120	1620	4917
70°	4551	1247	4337
75°	3828	876	3548
80°	2875	534	2692
85°	1687	236	1598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.0	2.3
10°-20°	298.9	6.6
20°-30°	437.9	9.6
30°-40°	501.8	11.0
40°-50°	494.7	10.8
50°-60°	426.4	9.3
60°-70°	310.9	6.8
70°-80°	169.6	3.7
80°-90°	44.5	1.0
90°-100°	15.2	0.3
100°-110°	119.4	2.6
110°-120°	231.0	5.1
120°-130°	300.4	6.6
130°-140°	326.1	7.1
140°-150°	308.5	6.8
150°-160°	251.7	5.5
160°-170°	162.9	3.6
170°-180°	56.1	1.2
0°-30°	842.8	18.5
0°-40°	1344.6	29.5
0°-60°	2265.8	49.7
0°-90°	2790.8	61.2
90°-120°	365.6	8.0
90°-150°	1300.6	28.5
90°-180°	1771.0	38.8
0°-180°	4562.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1126	1126	1126	1126	1126	
5°	1129	1121	1113	1119	1127	107
15°	1073	1065	1057	1059	1068	302
25°	967	964	936	956	958	445
35°	824	816	774	804	813	516
45°	662	649	612	638	650	511
55°	494	485	451	475	481	440
65°	328	320	296	312	314	324
75°	168	162	149	155	156	179
85°	38	39	36	37	36	43
90°	1	3	2	3	1	4
95°	21	5	6	6	18	26
105°	119	122	117	119	115	126
115°	232	238	233	235	226	230
125°	334	341	337	334	328	299
135°	425	429	425	421	414	327
145°	496	502	493	494	485	310
155°	549	552	548	546	540	253
165°	583	580	576	577	576	165
175°	597	590	580	590	594	57
180°	590	590	590	590	590	



TEST NUMBER: P199502

CATALOG NUMBER: S124-DIW-ULO-1-30-0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1	1126.1
2.5°	1134.3	1121.3	1125.4	1122.7	1115.2	1122.7	1124.7	1120.6	1132.9
5°	1128.8	1116.6	1120.6	1116.6	1113.2	1115.9	1119.3	1114.5	1126.8
7.5°	1120.6	1107.7	1111.1	1107.7	1104.3	1107.0	1109.1	1105.0	1117.9
10°	1109.1	1095.5	1098.9	1094.8	1090.7	1093.4	1095.5	1091.4	1104.3
12.5°	1092.7	1079.8	1082.5	1079.8	1076.4	1077.1	1078.4	1074.4	1088.0
15°	1073.0	1060.1	1064.8	1062.1	1057.3	1060.1	1059.4	1054.6	1067.5
17.5°	1050.5	1038.3	1043.7	1041.0	1034.2	1038.3	1038.3	1030.8	1044.4
20°	1026.0	1013.1	1020.6	1013.8	1006.3	1010.4	1013.8	1004.9	1018.5
22.5°	998.8	985.2	994.0	981.8	973.6	978.4	986.5	977.0	989.2
25°	966.8	955.9	964.1	947.0	936.1	943.0	955.9	946.4	957.9
27.5°	935.5	924.6	931.4	912.3	897.3	906.2	922.5	914.4	924.6
30°	900.7	891.9	895.3	872.8	857.2	866.7	885.8	881.0	889.2
32.5°	862.6	855.8	855.8	832.0	815.6	826.5	847.0	845.6	851.0
35°	824.5	820.4	815.6	789.8	774.1	784.3	804.1	809.5	812.9
37.5°	785.7	783.0	774.1	748.9	733.9	744.8	763.2	771.4	773.4
40°	745.5	744.1	731.9	708.1	693.1	704.0	723.0	733.3	732.6
42.5°	704.7	706.0	691.0	667.9	652.9	663.8	681.5	695.1	691.7
45°	662.4	666.5	648.8	627.7	612.1	623.6	637.9	655.0	649.5
47.5°	621.6	626.4	608.0	586.2	571.2	583.5	597.8	616.2	608.0
50°	575.3	584.8	567.1	545.3	530.4	541.9	559.0	574.6	565.1
52.5°	535.1	541.9	526.3	505.2	490.9	500.4	517.4	533.1	522.9
55°	493.6	501.1	485.4	464.3	450.7	460.2	475.2	490.9	480.7
57.5°	450.0	457.5	443.2	424.2	411.2	421.4	437.1	448.0	438.5
60°	407.8	417.3	401.7	383.3	372.4	380.6	392.8	405.8	396.2
62.5°	367.0	375.8	360.8	343.8	333.6	341.1	354.0	364.2	355.4
65°	327.5	332.9	320.0	304.3	295.5	300.2	311.8	323.4	314.5
67.5°	287.3	292.8	279.8	266.2	257.4	262.1	271.7	282.5	274.4
70°	246.5	251.2	240.3	228.1	220.6	225.4	234.2	242.4	234.9
72.5°	207.7	211.1	200.8	191.3	185.9	189.3	195.4	202.9	199.5
75°	168.2	172.3	162.0	153.9	149.1	150.5	155.2	161.4	155.9
77.5°	130.7	134.8	126.6	120.5	117.8	118.5	121.9	126.6	119.8
80°	96.0	99.4	94.6	89.2	86.5	87.8	89.9	92.6	89.9
82.5°	64.7	68.1	64.7	61.3	59.2	60.6	61.3	62.6	60.6
85°	38.1	40.8	38.8	36.8	36.1	36.1	36.8	38.1	36.1
87.5°	17.0	19.1	17.7	16.3	14.3	15.0	15.7	17.0	15.7
90°	1.4	3.4	2.7	2.0	2.0	2.0	2.7	3.4	1.4
92.5°	6.6	3.5	3.5	3.5	3.5	3.5	3.5	3.8	4.5
95°	20.6	13.3	5.2	5.6	5.6	5.6	5.6	9.1	18.5
97.5°	40.2	46.9	10.1	6.6	6.6	6.6	10.1	44.4	37.4
100°	63.7	70.0	51.1	16.1	11.9	15.0	44.8	66.1	60.5
102.5°	89.9	98.0	94.1	52.8	30.4	45.1	91.3	93.8	87.5
105°	118.9	125.9	122.1	123.8	117.2	119.3	119.3	120.7	115.4
107.5°	147.6	153.6	151.5	150.1	144.8	146.2	149.7	149.0	143.1
110°	176.3	182.3	182.3	177.7	171.4	173.9	179.5	176.0	171.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	205.0	209.6	210.6	208.2	200.8	204.3	207.5	201.9	198.7
115°	231.9	238.6	237.9	238.2	233.0	233.0	234.7	230.5	226.0
117.5°	261.0	265.9	264.8	265.2	261.7	260.3	259.9	257.1	252.2
120°	286.5	292.1	292.8	290.4	287.9	285.1	286.9	283.0	277.8
122.5°	310.7	317.0	318.0	315.6	313.1	310.0	311.4	307.2	302.3
125°	334.4	341.4	341.4	339.7	337.2	334.1	333.7	330.3	328.5
127.5°	358.2	366.3	364.9	363.1	361.0	357.5	355.8	353.7	350.9
130°	382.4	388.0	386.6	385.2	383.8	379.6	378.2	376.1	372.9
132.5°	404.4	407.6	408.3	405.5	405.5	400.2	399.9	397.4	391.8
135°	424.7	427.9	429.3	425.1	425.1	419.8	420.9	417.4	413.9
137.5°	444.0	446.4	448.1	443.3	443.6	438.7	440.5	434.5	433.1
140°	462.5	463.5	466.7	461.4	460.7	456.5	459.0	453.0	451.3
142.5°	478.9	480.3	484.2	478.6	476.8	473.7	476.8	469.5	468.4
145°	495.7	496.1	501.7	495.0	492.9	490.5	494.3	485.6	484.9
147.5°	510.4	509.7	516.4	510.8	508.7	506.2	510.4	500.3	500.3
150°	524.1	523.4	529.7	525.1	523.0	520.9	523.4	513.9	513.9
152.5°	537.4	534.9	541.2	537.4	536.7	533.5	535.6	526.5	527.9
155°	548.6	546.1	552.1	548.9	547.5	545.1	546.5	537.7	539.8
157.5°	559.4	555.5	560.8	559.4	556.9	555.5	555.5	548.6	551.0
160°	568.8	564.3	568.8	566.7	564.6	562.9	564.3	557.3	560.4
162.5°	576.5	572.3	574.8	572.0	570.9	568.1	570.9	565.3	568.8
165°	582.8	578.3	580.0	576.2	575.5	573.4	576.9	573.0	576.5
167.5°	588.4	584.2	583.5	579.7	579.7	576.9	581.1	579.0	582.5
170°	592.3	588.8	587.4	581.8	581.8	579.3	585.3	583.5	587.7
172.5°	596.1	591.6	589.1	583.2	580.7	581.1	588.4	587.0	591.2
175°	596.8	593.3	590.5	584.2	579.7	582.8	590.2	590.5	593.7
177.5°	597.5	594.0	590.5	585.3	584.6	583.9	591.6	591.2	595.8
180°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5

(END OF REPORT)