

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: P199501

Luminaire Tested: **S124-DIP-ULO-1-30-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199501
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIP-ULO-1-30-X-X0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LLO-3000K, SATIN WHITE DIFFUSER
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4272.7 lumens
Efficiency: N/A
Efficacy: 106.6 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

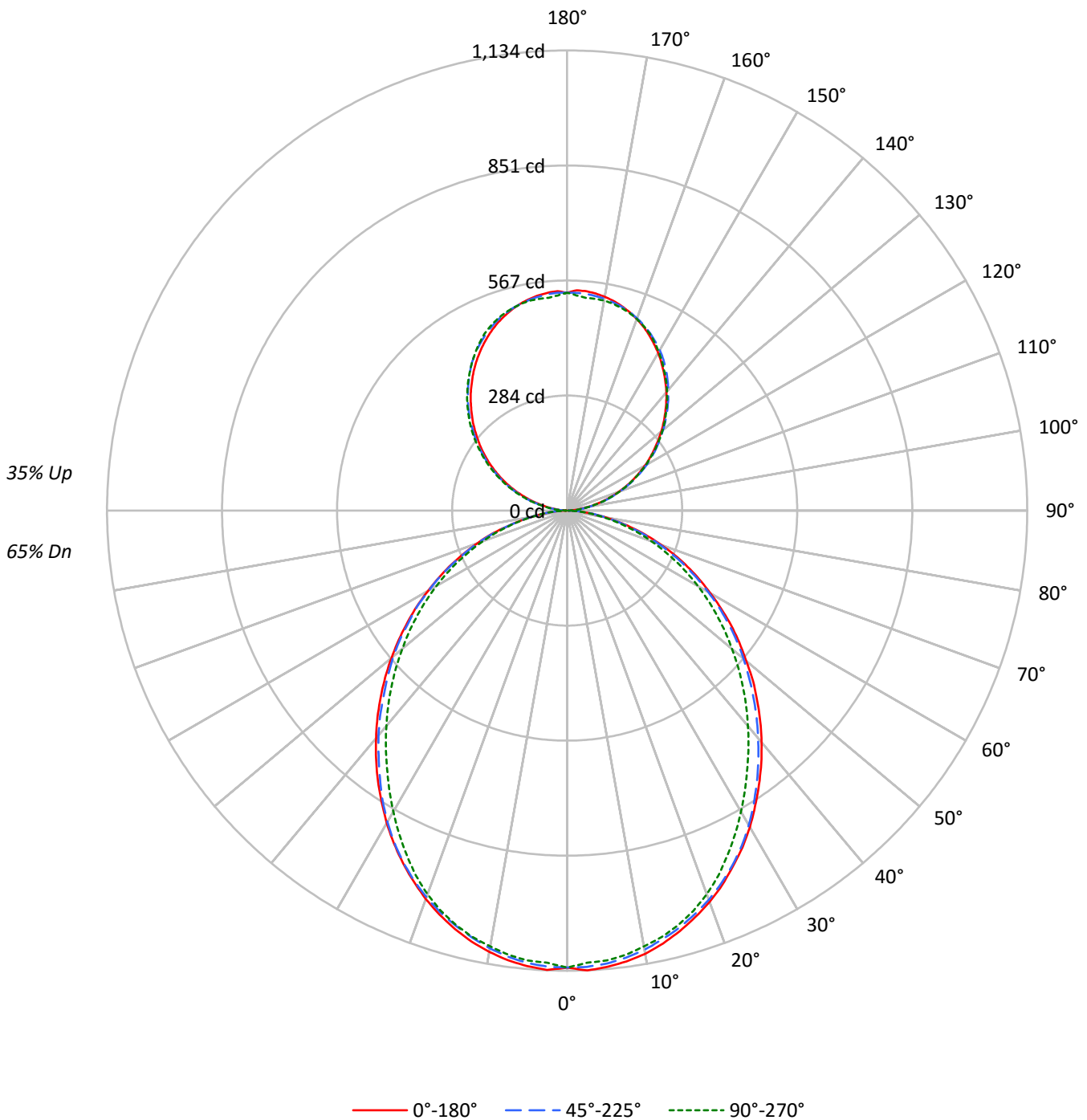
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	70	70	70	65
1	101	97	93	89	95	91	88	85	81	78	76	71	69	67	62	61	60	55
2	92	85	79	73	87	80	74	70	71	67	63	63	59	57	55	53	50	46
3	84	75	67	61	79	71	64	58	63	57	53	55	51	48	49	46	43	39
4	77	66	58	52	72	63	55	50	56	50	45	50	45	41	44	40	37	34
5	71	59	51	45	67	56	49	43	50	44	39	45	40	36	39	36	32	30
6	66	53	45	39	61	50	43	37	45	39	34	40	35	32	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	23
8	56	44	36	31	53	42	34	29	38	32	27	34	29	25	30	26	23	21
9	53	40	33	27	50	38	31	26	35	29	24	31	26	23	28	24	21	19
10	49	37	30	25	46	35	28	24	32	26	22	29	24	21	26	22	19	17

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	2.5
10°-20°	298.9	7.0
20°-30°	437.9	10.2
30°-40°	501.8	11.7
40°-50°	494.7	11.6
50°-60°	426.4	10.0
60°-70°	310.9	7.3
70°-80°	169.6	4.0
80°-90°	44.5	1.0
90°-100°	27.8	0.7
100°-110°	100.1	2.3
110°-120°	177.1	4.1
120°-130°	235.5	5.5
130°-140°	264.8	6.2
140°-150°	260.4	6.1
150°-160°	219.7	5.1
160°-170°	145.8	3.4
170°-180°	50.8	1.2
0°-30°	842.8	19.7
0°-40°	1344.6	31.5
0°-60°	2265.8	53.0
0°-90°	2790.8	65.3
90°-120°	305.0	7.1
90°-150°	1065.6	24.9
90°-180°	1482.0	34.7
0°-180°	4272.7	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°	23	26	25	23	18	25
105°	93	97	96	94	86	98
115°	179	183	180	178	171	177
125°	262	268	265	261	254	234
135°	342	349	346	342	332	264
145°	415	424	418	418	406	260
155°	478	483	481	478	469	220
165°	521	520	517	516	515	147
175°	543	536	526	535	539	52
180°	537	537	537	537	537	



TEST NUMBER: P199501

CATALOG NUMBER: S124-DIP-ULO-1-30-X-X0048-1D-UDD-1-5-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°	10.5	11.9	12.2	11.2	11.2	10.8	10.1	9.8	6.3
95°	23.1	25.2	25.5	25.5	24.8	24.1	23.4	21.7	17.8
97.5°	37.4	39.9	40.6	39.9	40.2	39.5	37.8	36.0	32.2
100°	53.9	57.0	57.7	57.0	57.4	55.6	54.9	53.2	48.6
102.5°	72.1	75.9	76.3	75.6	75.6	74.2	73.5	71.4	66.8
105°	92.7	96.9	97.3	95.9	95.9	94.5	93.8	91.7	86.4
107.5°	113.7	117.9	117.9	116.5	116.5	115.4	114.0	112.6	107.4
110°	135.4	138.9	139.6	137.8	137.5	136.4	135.0	132.9	128.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	157.1	160.6	161.3	159.2	158.8	156.7	156.4	153.9	149.4
115°	178.8	182.3	183.3	180.9	180.2	177.7	177.7	175.3	171.1
117.5°	199.8	204.0	205.0	202.2	201.9	199.8	198.4	196.3	191.7
120°	220.8	226.0	226.7	223.5	223.2	220.8	220.1	217.3	212.7
122.5°	241.7	247.0	248.0	245.2	244.2	241.0	240.7	238.2	233.3
125°	261.7	267.6	267.6	266.2	265.2	262.7	261.3	258.5	253.6
127.5°	282.3	288.6	288.3	287.2	286.2	282.7	281.6	278.8	273.6
130°	302.6	308.2	308.2	307.5	306.8	303.7	301.9	299.1	293.2
132.5°	322.6	328.2	328.9	327.1	326.4	322.2	322.6	319.1	313.1
135°	342.1	347.0	348.8	346.0	345.6	341.1	342.5	337.9	332.0
137.5°	361.4	365.2	368.4	364.9	364.5	360.0	362.1	356.1	350.9
140°	380.3	383.4	387.6	383.4	382.7	378.5	380.6	374.3	369.8
142.5°	398.1	400.9	406.2	401.6	400.6	396.7	399.2	391.8	387.6
145°	415.3	417.4	424.4	419.5	418.1	414.6	417.7	408.6	405.5
147.5°	432.4	433.5	441.5	437.0	434.9	432.1	435.2	425.1	422.6
150°	448.5	448.5	456.5	453.0	451.3	448.1	450.2	440.5	438.7
152.5°	463.5	462.8	470.2	468.1	467.0	463.5	464.2	455.1	454.1
155°	477.5	476.1	482.8	481.7	481.0	477.5	477.5	468.4	468.8
157.5°	490.8	488.0	494.3	494.0	492.6	489.8	489.1	481.0	482.1
160°	502.4	499.9	504.1	503.4	502.4	499.6	499.6	492.6	494.3
162.5°	512.5	509.4	512.9	510.8	510.4	507.3	508.7	502.7	505.2
165°	521.3	518.1	519.9	517.1	516.7	513.9	516.4	512.2	515.0
167.5°	529.0	525.5	525.1	522.7	522.0	519.9	522.7	520.2	523.4
170°	534.9	531.4	530.4	526.2	525.5	523.7	527.9	527.2	530.0
172.5°	539.5	536.0	533.5	528.6	526.2	526.5	532.1	532.1	535.3
175°	542.6	538.8	536.0	531.1	526.5	529.3	535.3	535.6	539.1
177.5°	543.3	539.5	537.0	532.5	530.7	531.1	537.4	537.4	541.2
180°	536.7	536.7	536.7	536.7	536.7	536.7	536.7	536.7	536.7

(END OF REPORT)