

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: P199434

Luminaire Tested: **S122-DIP-ULO-LO-35-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P199434  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27883)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122-DIP-ULO-LO-35-X-X0048-1D-UDD-1-5-W  
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE  
UPLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
DOWNLIGHT LLO-3500K, SATIN WHITE DIFFUSER  
Light Source: -  
757G  
Ballast/Driver: ELECTRONIC DRIVERS

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2686.5 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')  
CIE Type: General Diffuse

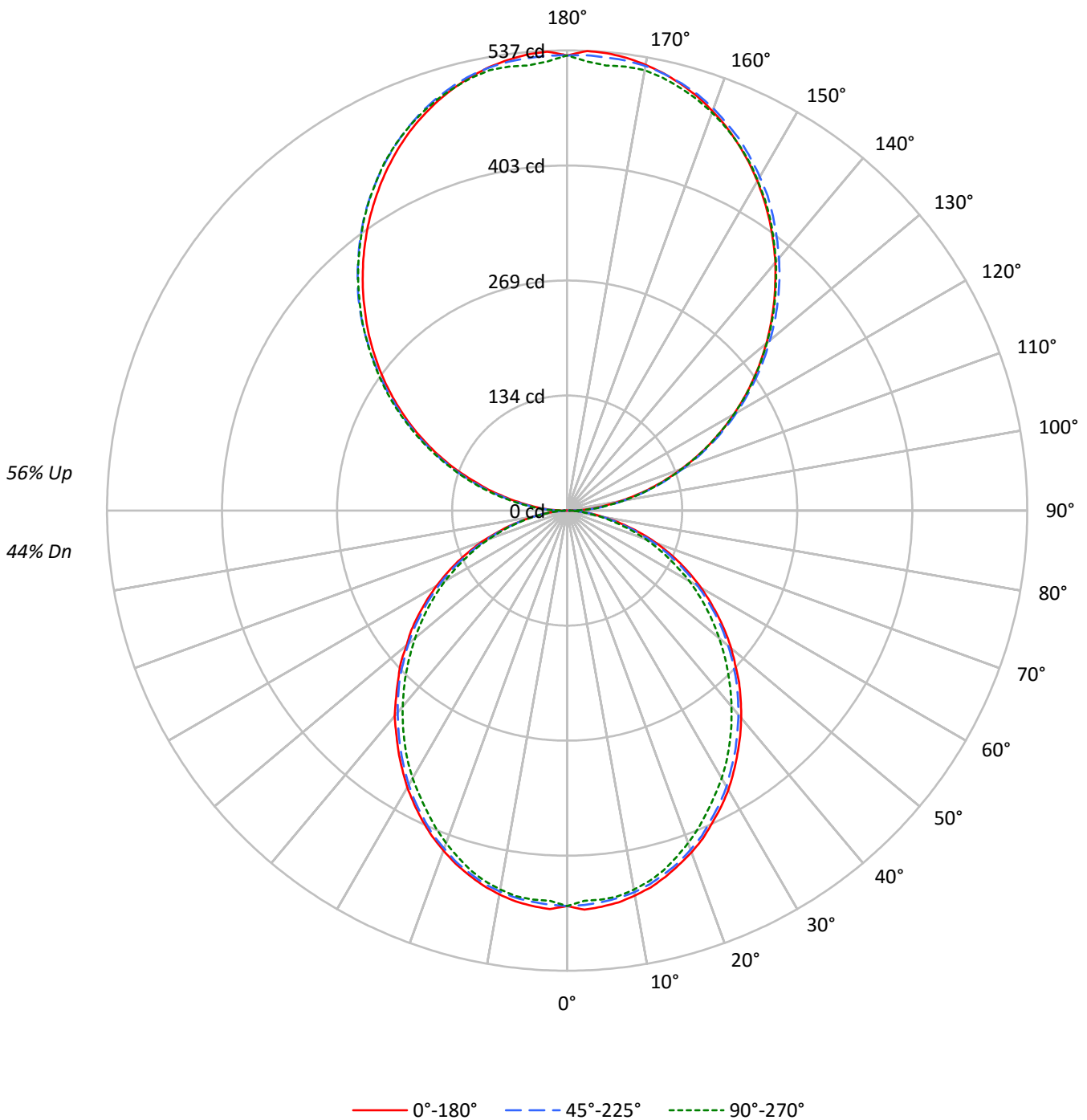
Input Watts (W): 26.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	44
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	37
2	88	81	75	69	80	74	69	64	62	58	55	50	47	45	40	38	36	31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	28	25	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	49	38	31	26	32	27	23	27	22	19	21	18	16	14
9	49	37	30	25	45	35	28	23	29	24	20	24	20	17	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	7299	7299	7299
5°	7308	6046	7297
10°	7208	5163	7191
15°	7073	4441	7044
20°	6912	3821	6876
25°	6719	3297	6684
30°	6525	2866	6469
35°	6286	2480	6228
40°	6056	2133	6000
45°	5812	1825	5709
50°	5540	1548	5423
55°	5239	1296	5151
60°	4929	1063	4803
65°	4552	835	4396
70°	4084	627	3888
75°	3409	423	3186
80°	2545	246	2306
85°	1576	97	1328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	1.6
10°-20°	123.2	4.6
20°-30°	181.7	6.8
30°-40°	211.8	7.9
40°-50°	212.3	7.9
50°-60°	185.7	6.9
60°-70°	136.6	5.1
70°-80°	74.1	2.8
80°-90°	19.0	0.7
90°-100°	36.8	1.4
100°-110°	108.1	4.0
110°-120°	181.8	6.8
120°-130°	237.0	8.8
130°-140°	264.3	9.8
140°-150°	258.4	9.6
150°-160°	217.4	8.1
160°-170°	144.5	5.4
170°-180°	50.3	1.9
0°-30°	348.3	13.0
0°-40°	560.2	20.9
0°-60°	958.2	35.7
0°-90°	1187.8	44.2
90°-120°	326.7	12.2
90°-150°	1086.4	40.4
90°-180°	1499.0	55.8
0°-180°	2686.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	464	459	456	458	463	44
15°	443	439	435	438	441	125
25°	402	398	387	396	399	185
35°	346	342	331	339	343	217
45°	284	279	265	276	279	219
55°	215	211	198	207	211	192
65°	146	140	130	136	141	144
75°	75	71	65	67	70	80
85°	18	17	14	15	15	20
90°	1	2	2	2	0	4
95°	31	35	35	33	29	32
105°	101	106	104	101	95	107
115°	184	187	184	181	177	182
125°	264	269	265	263	258	236
135°	341	348	342	344	334	263
145°	412	419	414	414	405	258
155°	472	477	472	472	466	218
165°	515	516	511	513	511	145
175°	536	531	521	530	534	51
180°	531	531	531	531	531	



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CATALOG NUMBER: S122-DIP-ULO-LO-35-X-X0048-1D-UDD-1-5-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5	461.5
2.5°	466.1	459.7	460.8	459.3	455.8	459.0	460.4	459.3	465.4
5°	464.0	457.5	458.6	456.8	455.8	456.8	458.3	456.8	463.3
7.5°	461.1	454.0	456.1	455.0	454.0	454.7	455.8	453.3	460.0
10°	456.1	449.0	452.2	450.1	449.0	449.7	451.5	447.9	455.0
12.5°	450.4	443.3	446.5	444.0	442.9	442.9	446.1	442.2	448.6
15°	442.6	436.8	439.0	436.5	434.7	435.8	438.3	435.4	440.8
17.5°	433.6	428.6	431.1	427.2	424.0	426.5	430.1	426.9	432.2
20°	424.4	418.6	421.1	415.8	412.9	415.1	419.7	417.2	422.2
22.5°	414.0	408.7	410.8	403.7	400.8	402.6	409.4	406.9	411.5
25°	401.5	397.2	397.6	390.4	387.2	389.4	396.5	395.1	399.4
27.5°	389.4	385.1	385.5	377.2	373.7	376.5	383.7	382.6	386.5
30°	376.2	372.2	371.9	363.7	360.8	362.6	369.7	369.7	373.0
32.5°	361.5	358.3	356.5	349.0	346.2	348.3	354.4	355.5	358.0
35°	346.5	344.4	341.9	334.8	330.8	333.7	339.4	340.8	343.3
37.5°	331.6	329.1	326.2	319.1	314.8	318.4	323.4	325.8	327.6
40°	315.9	314.1	310.9	303.7	298.4	301.9	307.6	310.5	313.0
42.5°	299.8	298.7	294.8	287.3	282.0	285.9	291.9	294.4	295.5
45°	283.7	282.3	278.7	270.9	265.2	269.5	275.9	278.4	278.7
47.5°	265.9	266.2	262.0	254.1	248.4	252.7	258.4	262.0	263.4
50°	249.8	250.2	245.2	237.3	231.6	234.8	241.6	245.2	244.5
52.5°	232.7	233.8	228.4	220.6	214.9	218.1	224.8	228.8	229.1
55°	214.9	216.6	210.9	203.1	198.1	201.3	207.0	211.6	211.3
57.5°	197.7	199.2	193.4	186.3	181.3	184.2	189.2	195.2	193.8
60°	180.6	182.0	176.0	168.8	164.5	166.0	171.7	176.7	176.0
62.5°	163.1	164.5	158.1	151.7	146.7	148.8	153.8	159.9	158.1
65°	145.6	146.7	139.9	134.2	129.9	132.1	135.6	142.0	140.6
67.5°	128.1	128.8	122.8	117.4	113.9	114.9	118.1	123.5	122.8
70°	110.6	111.4	105.6	100.6	97.4	98.5	101.0	106.0	105.3
72.5°	92.8	93.9	88.2	83.5	80.3	81.4	83.2	87.8	86.7
75°	74.9	75.7	71.4	67.8	65.0	65.3	66.7	70.3	70.0
77.5°	58.5	60.3	55.7	52.5	50.3	50.7	52.5	54.2	53.5
80°	42.5	44.6	41.4	38.9	37.1	36.8	38.2	39.6	38.5
82.5°	30.0	30.3	28.2	26.4	24.6	24.6	25.7	26.8	25.7
85°	17.8	18.6	16.8	15.3	14.3	13.9	14.6	15.7	15.0
87.5°	8.6	8.9	7.1	6.4	5.4	5.0	5.4	6.1	6.1
90°	0.7	1.8	1.8	2.1	2.5	2.5	2.1	2.1	0.4
92.5°	19.3	21.4	22.5	21.8	21.4	20.3	20.3	19.3	17.1
95°	30.7	33.9	35.3	35.0	35.0	33.5	33.2	32.1	28.9
97.5°	45.3	48.9	50.0	50.3	50.0	48.2	47.1	46.0	42.5
100°	62.1	65.7	66.7	66.7	66.4	64.6	63.2	61.7	57.8
102.5°	80.7	84.2	85.3	84.6	84.6	82.1	80.7	79.6	75.3
105°	101.4	104.9	105.6	104.6	104.2	101.7	100.6	99.2	95.3
107.5°	121.3	124.9	124.6	124.2	122.8	121.0	120.3	118.1	113.1
110°	142.0	146.7	144.9	144.2	142.8	141.0	140.3	139.5	135.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	162.7	167.7	165.6	164.9	163.1	161.0	161.0	160.6	156.7
115°	183.8	188.8	186.7	185.2	183.8	181.7	181.3	181.7	177.4
117.5°	204.1	209.9	207.4	205.6	204.1	201.6	202.0	202.7	198.1
120°	224.5	230.9	228.1	225.9	224.8	222.0	222.3	223.8	218.4
122.5°	244.5	250.9	248.4	246.3	245.2	242.0	242.7	243.4	238.4
125°	264.5	270.9	268.7	266.2	265.2	263.0	263.4	263.4	258.4
127.5°	284.1	290.5	289.1	286.2	284.8	282.0	283.4	282.3	278.0
130°	303.4	309.4	308.7	305.5	304.4	302.7	303.7	300.5	297.3
132.5°	322.3	328.3	328.7	325.1	323.7	321.9	324.1	320.5	316.2
135°	341.2	346.5	348.0	344.1	342.3	340.8	343.7	338.0	334.4
137.5°	359.4	363.7	366.9	362.3	360.8	358.3	361.9	356.2	353.0
140°	378.0	381.5	384.4	380.8	379.0	376.9	379.7	374.0	370.8
142.5°	395.1	399.0	401.9	398.3	396.2	394.4	397.2	391.2	388.3
145°	412.2	415.4	419.0	415.8	413.6	411.9	414.4	408.3	405.4
147.5°	428.3	431.1	435.4	431.8	429.7	428.3	430.1	424.0	421.5
150°	444.0	445.4	449.7	447.6	444.7	443.3	444.7	439.3	437.2
152.5°	458.6	459.7	463.6	461.1	459.7	457.2	459.0	453.6	452.2
155°	472.2	472.5	477.2	474.3	472.5	470.8	472.2	467.9	466.1
157.5°	485.0	485.0	488.2	486.8	484.0	483.2	484.3	479.7	479.3
160°	496.1	495.4	499.3	496.8	494.3	493.6	495.4	491.1	490.7
162.5°	506.4	505.0	508.6	505.4	503.2	502.5	505.0	501.1	501.4
165°	515.0	513.2	516.1	512.9	510.7	510.4	513.2	509.3	510.7
167.5°	522.5	519.6	522.1	518.9	517.1	516.8	520.0	516.4	518.6
170°	528.2	524.6	526.8	522.5	521.8	521.1	525.0	521.8	525.4
172.5°	532.9	528.9	529.6	525.0	522.5	523.9	528.2	526.4	530.4
175°	535.7	531.4	530.7	525.7	521.4	524.6	530.0	529.6	534.3
177.5°	536.8	532.9	531.8	526.1	524.6	525.4	531.4	531.8	536.1
180°	531.1	531.1	531.1	531.1	531.1	531.1	531.1	531.1	531.1

(END OF REPORT)