

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P907013

Luminaire Tested: DFN2DIP-TR2F0-030D030US835-FLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P907013
REPORT IS A COMBINATION OF REPORTS P901753 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-030D030US835-FLLONL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

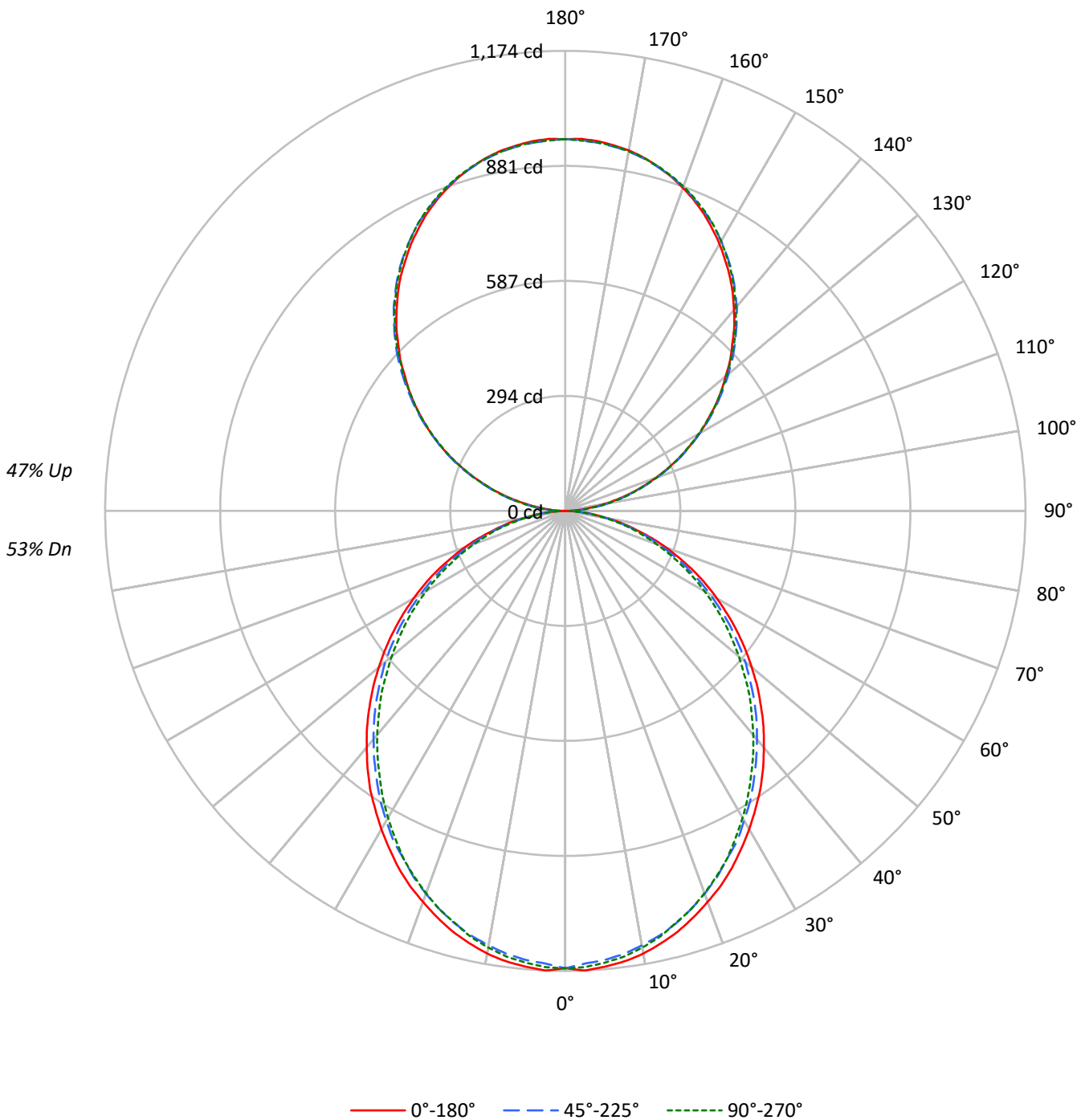
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5625.0 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 47
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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				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	50	30	10	0
RCR																					
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	59	59	59	53
1	98	94	90	87	91	87	84	81	74	72	70	63	61	59	52	51	50	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	46	44	42	37
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36	41	38	36	32
4	75	64	56	50	69	60	52	47	51	46	41	43	39	36	36	33	31	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	33	29	27	24
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24	30	26	24	21
7	59	46	38	33	54	43	36	31	37	32	28	32	28	24	27	24	21	27	24	21	18
8	54	42	34	29	50	39	32	27	34	29	24	29	25	22	25	21	19	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	23	20	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2604	2604	2604
5°	2604	2561	2580
10°	2579	2521	2541
15°	2537	2474	2482
20°	2482	2410	2421
25°	2427	2336	2352
30°	2359	2266	2266
35°	2295	2184	2175
40°	2216	2102	2088
45°	2137	2019	1998
50°	2050	1931	1895
55°	1960	1830	1800
60°	1856	1712	1690
65°	1744	1587	1560
70°	1600	1436	1420
75°	1403	1255	1285
80°	1163	1023	1039
85°	793	645	645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	2.0
10°-20°	309.1	5.5
20°-30°	454.3	8.1
30°-40°	527.6	9.4
40°-50°	527.0	9.4
50°-60°	459.5	8.2
60°-70°	339.7	6.0
70°-80°	192.2	3.4
80°-90°	53.4	0.9
90°-100°	58.7	1.0
100°-110°	186.5	3.3
110°-120°	319.2	5.7
120°-130°	419.8	7.5
130°-140°	471.2	8.4
140°-150°	462.1	8.2
150°-160°	387.7	6.9
160°-170°	257.1	4.6
170°-180°	89.9	1.6
0°-30°	873.3	15.5
0°-40°	1400.9	24.9
0°-60°	2387.4	42.4
0°-90°	2972.7	52.8
90°-120°	564.5	10.0
90°-150°	1917.7	34.1
90°-180°	2652.0	47.1
0°-180°	5625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1167	1163	1150	1160	1157	111
15°	1111	1105	1090	1094	1089	313
25°	1006	997	978	980	978	463
35°	868	856	838	832	826	542
45°	706	698	681	669	664	545
55°	534	528	514	501	495	478
65°	360	354	342	332	327	356
75°	188	186	181	174	176	201
85°	46	45	44	40	39	51
90°	1	10	28	26	27	5
95°	42	50	51	51	50	46
105°	172	174	176	178	178	182
115°	320	325	324	323	320	317
125°	466	473	471	468	467	416
135°	603	612	613	612	610	466
145°	732	737	742	743	740	457
155°	837	839	842	846	843	385
165°	910	909	909	915	911	257
175°	947	945	943	949	944	90
180°	949	949	949	949	949	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1167.3	1167.3	1167.3	1167.3	1167.3
2.5°	1174.1	1168.5	1156.1	1167.3	1165.2
5°	1167.3	1162.9	1150.5	1159.5	1157.3
7.5°	1159.5	1152.8	1140.4	1149.5	1147.2
10°	1147.2	1139.3	1125.9	1134.8	1131.5
12.5°	1130.3	1123.6	1110.2	1115.7	1113.5
15°	1111.2	1104.6	1089.9	1094.4	1088.8
17.5°	1087.6	1081.0	1066.3	1071.9	1066.3
20°	1061.8	1055.1	1039.4	1042.7	1038.3
22.5°	1036.1	1026.0	1011.3	1011.3	1009.0
25°	1005.7	996.8	977.7	979.9	977.7
27.5°	972.0	964.1	949.6	946.3	940.7
30°	938.4	929.4	912.6	909.2	904.7
32.5°	902.5	895.8	877.8	871.0	866.5
35°	867.7	856.5	838.5	831.7	826.1
37.5°	828.4	818.3	800.3	792.4	786.8
40°	788.0	779.0	761.0	751.0	746.5
42.5°	748.7	739.7	721.8	710.5	703.8
45°	706.1	698.2	681.3	669.0	664.5
47.5°	664.5	656.7	638.7	626.3	619.6
50°	620.7	615.1	599.4	583.7	578.1
52.5°	578.1	570.2	555.7	543.3	535.4
55°	534.4	527.6	514.1	500.7	495.1
57.5°	490.5	484.9	470.3	456.8	452.3
60°	446.7	442.3	426.6	414.2	410.9
62.5°	404.1	396.2	385.0	373.8	369.3
65°	360.4	353.6	342.4	332.3	326.7
67.5°	315.5	309.8	299.7	291.9	287.4
70°	273.9	269.4	259.3	251.4	247.0
72.5°	231.3	226.7	221.1	213.3	210.0
75°	188.5	186.4	180.7	174.0	176.3
77.5°	150.4	145.9	143.6	140.3	137.0
80°	112.3	111.1	108.8	105.5	103.3
82.5°	76.3	76.3	75.3	70.7	70.7
85°	46.0	44.9	43.8	40.4	39.3
87.5°	20.2	18.0	15.7	12.4	11.2
90°	0.9	10.3	28.0	26.3	27.2
92.5°	17.7	24.0	24.9	25.7	25.7
95°	41.8	49.8	51.2	51.2	49.8
97.5°	69.5	76.9	80.1	80.1	80.1
100°	101.5	108.1	110.4	110.4	109.6
102.5°	135.3	140.2	143.3	144.2	143.3
105°	172.2	174.5	176.2	177.6	177.6
107.5°	208.8	212.2	212.2	212.8	208.8
110°	244.3	248.9	248.9	248.9	246.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	282.6	287.5	286.6	284.3	282.6
115°	320.4	324.9	323.5	322.7	320.4
117.5°	357.8	364.1	360.1	357.8	355.5
120°	395.6	401.9	395.6	395.6	393.0
122.5°	429.9	437.9	433.9	431.6	429.9
125°	466.0	473.1	470.8	468.2	467.4
127.5°	501.1	510.0	506.9	503.4	501.1
130°	534.0	544.3	542.9	541.2	538.0
132.5°	570.9	578.9	579.5	575.5	573.2
135°	602.7	611.5	613.3	612.4	610.1
137.5°	638.1	645.3	646.7	646.2	642.7
140°	669.3	676.5	680.5	680.5	677.3
142.5°	701.4	708.5	710.8	711.7	708.5
145°	731.7	737.4	742.0	742.8	739.7
147.5°	758.9	766.0	769.4	770.9	767.7
150°	786.9	791.8	794.9	797.5	794.9
152.5°	811.8	816.6	820.6	823.8	820.6
155°	836.7	838.9	841.5	845.5	843.0
157.5°	858.1	859.8	861.3	867.0	863.0
160°	877.3	879.0	879.9	884.7	881.3
162.5°	895.0	895.0	895.9	901.3	897.3
165°	910.2	909.3	909.3	915.0	911.0
167.5°	923.9	921.3	921.3	927.0	923.0
170°	934.2	931.9	931.1	936.8	931.9
172.5°	941.3	939.1	938.2	943.9	939.1
175°	947.1	944.8	943.1	948.8	943.9
177.5°	950.2	947.9	946.2	951.1	946.2
180°	948.8	948.8	948.8	948.8	948.8



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	10.73	11.61	11.66	12.56	13.79	10.30	11.19	11.23	12.14	13.37
	3H	12.37	13.16	13.31	14.12	15.37	11.90	12.70	12.85	13.66	14.91
	4H	12.94	13.69	13.90	14.66	15.92	12.48	13.23	13.44	14.20	15.46
	6H	13.32	14.02	14.29	14.98	16.26	12.86	13.56	13.83	14.52	15.80
	8H	13.42	14.08	14.39	15.06	16.34	12.96	13.62	13.93	14.61	15.88
	12H	13.46	14.09	14.44	15.07	16.36	13.00	13.62	13.98	14.60	15.90
4H	2H	11.18	11.94	12.15	12.90	14.16	10.84	11.60	11.81	12.56	13.82
	3H	13.02	13.65	14.00	14.64	15.92	12.64	13.27	13.61	14.26	15.54
	4H	13.72	14.29	14.70	15.28	16.58	13.33	13.90	14.31	14.89	16.19
	6H	14.21	14.71	15.21	15.72	17.02	13.82	14.31	14.81	15.32	16.62
	8H	14.35	14.82	15.35	15.82	17.13	13.96	14.42	14.95	15.42	16.73
	12H	14.42	14.83	15.43	15.85	17.17	14.01	14.43	15.03	15.45	16.77
8H	4H	13.91	14.37	14.90	15.37	16.69	13.56	14.02	14.55	15.02	16.34
	6H	14.51	14.90	15.53	15.94	17.25	14.16	14.54	15.18	15.59	16.90
	8H	14.72	15.06	15.75	16.09	17.42	14.36	14.70	15.39	15.73	17.06
	12H	14.84	15.13	15.87	16.16	17.53	14.47	14.76	15.50	15.79	17.16
12H	4H	13.89	14.31	14.91	15.33	16.65	13.55	13.97	14.56	14.99	16.30
	6H	14.54	14.88	15.57	15.91	17.24	14.20	14.53	15.23	15.57	16.90
	8H	14.76	15.06	15.80	16.09	17.46	14.42	14.72	15.45	15.74	17.12