

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: P923586

Luminaire Tested: DFN2DIP-TR3F0-080D030US940-FLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P923586
REPORT IS A COMBINATION OF REPORTS P900281 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-080D030US940-FLLFLL
Description: 3 foot, Triangle Define Geo, with Direct Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

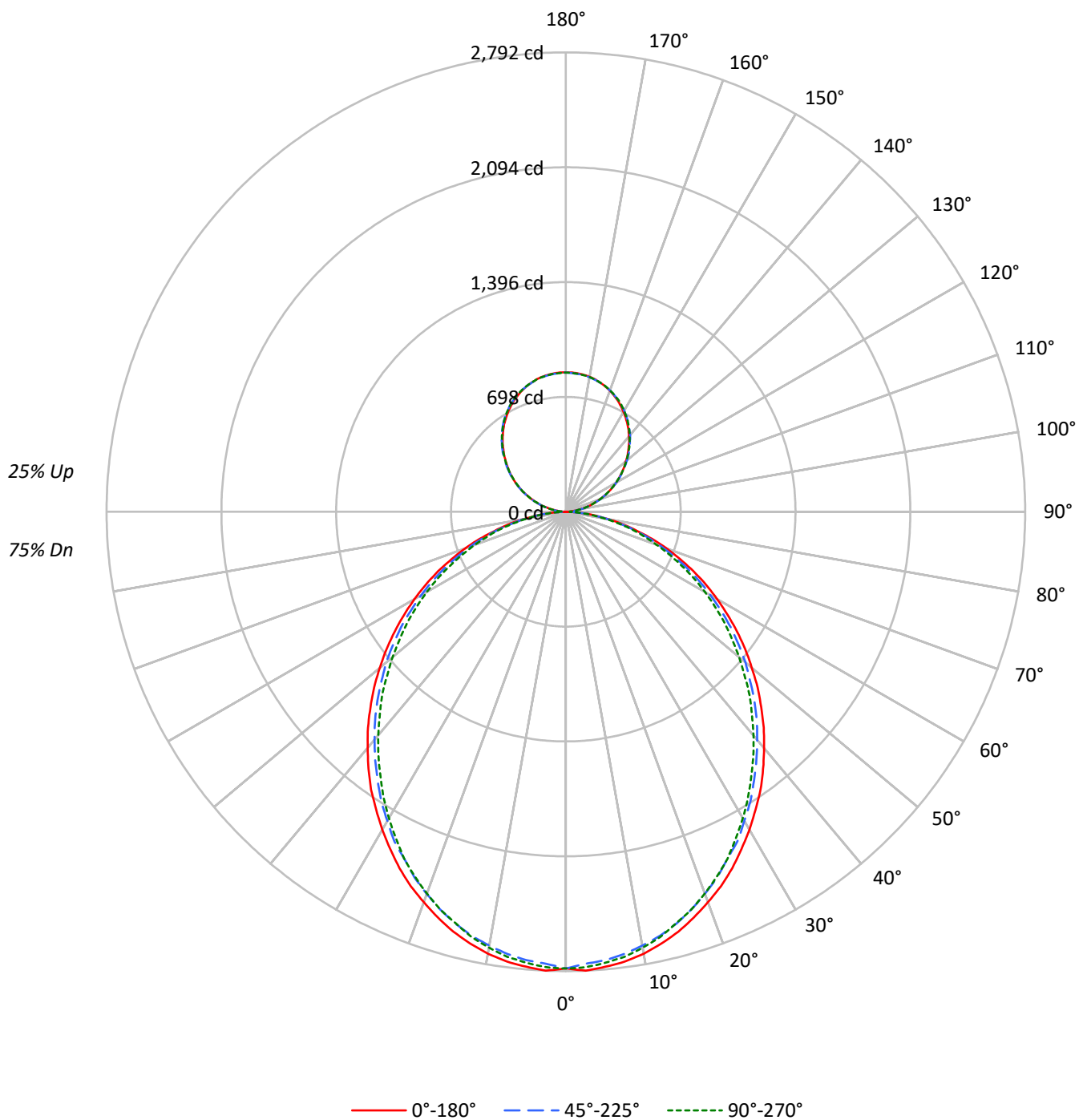
Lumens per Lamp: N/A
Luminaire Lumens: 9429.9 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: Semi-Direct

Input Watts (W): 103.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	113	113	113	113	108	108	108	108	97	97	97	88	88	88	79	79	79
1	103	99	95	91	98	94	91	87	85	83	80	77	75	73	70	68	67
2	94	86	80	75	89	82	77	72	75	70	66	68	64	61	62	59	56
3	86	76	68	62	81	73	66	60	66	61	56	60	56	52	55	51	48
4	79	67	59	53	75	64	57	51	59	53	48	54	49	45	49	45	41
5	72	60	52	45	69	58	50	44	53	46	41	48	43	39	44	40	36
6	67	54	46	40	63	52	44	39	48	41	36	44	38	34	40	35	32
7	62	49	41	35	59	47	39	34	43	37	32	40	34	30	37	32	28
8	58	45	37	31	55	43	36	30	40	33	29	37	31	27	34	29	25
9	54	41	33	28	51	39	32	27	36	30	26	34	28	24	31	26	23
10	50	38	30	25	48	36	29	25	34	28	23	31	26	22	29	24	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3459	3459	3459
5°	3462	3408	3431
10°	3433	3359	3383
15°	3380	3301	3308
20°	3310	3221	3231
25°	3240	3126	3143
30°	3153	3038	3031
35°	3070	2934	2914
40°	2969	2829	2801
45°	2868	2724	2686
50°	2757	2613	2554
55°	2641	2485	2430
60°	2510	2333	2290
65°	2366	2175	2124
70°	2183	1983	1944
75°	1930	1753	1776
80°	1625	1459	1459
85°	1147	960	943

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2868 cd/sqm

TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	2.8
10°-20°	735.1	7.8
20°-30°	1080.3	11.5
30°-40°	1254.7	13.3
40°-50°	1253.1	13.3
50°-60°	1092.7	11.6
60°-70°	807.7	8.6
70°-80°	457.0	4.8
80°-90°	123.0	1.3
90°-100°	52.3	0.6
100°-110°	166.3	1.8
110°-120°	284.7	3.0
120°-130°	374.4	4.0
130°-140°	420.2	4.5
140°-150°	412.1	4.4
150°-160°	345.7	3.7
160°-170°	229.2	2.4
170°-180°	80.1	0.8
0°-30°	2076.6	22.0
0°-40°	3331.3	35.3
0°-60°	5677.0	60.2
0°-90°	7064.8	74.9
90°-120°	503.4	5.3
90°-150°	1710.0	18.1
90°-180°	2365.0	25.1
0°-180°	9429.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2776	2776	2776	2776	2776	
5°	2776	2765	2736	2757	2752	263
15°	2642	2626	2592	2602	2589	744
25°	2392	2370	2325	2330	2325	1100
35°	2063	2037	1994	1978	1964	1288
45°	1679	1660	1620	1591	1580	1296
55°	1271	1254	1222	1190	1177	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	122
90°	1	9	25	24	24	9
95°	37	44	46	46	44	41
105°	154	156	157	158	158	162
115°	286	290	288	288	286	283
125°	416	422	420	418	417	371
135°	537	545	547	546	544	415
145°	652	658	662	662	660	408
155°	746	748	750	754	752	343
165°	812	811	811	816	812	229
175°	844	842	841	846	842	80
180°	846	846	846	846	846	

TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2775.7	2775.7	2775.7	2775.7	2775.7
2.5°	2791.9	2778.6	2749.1	2775.7	2770.6
5°	2775.7	2765.3	2735.9	2757.1	2752.0
7.5°	2757.1	2741.2	2711.8	2733.3	2727.9
10°	2727.9	2709.2	2677.2	2698.4	2690.6
12.5°	2687.7	2671.8	2639.8	2653.1	2647.8
15°	2642.4	2626.5	2591.7	2602.5	2589.2
17.5°	2586.3	2570.4	2535.6	2549.0	2535.6
20°	2524.9	2509.0	2471.6	2479.6	2469.1
22.5°	2463.7	2439.6	2404.8	2404.8	2399.4
25°	2391.5	2370.3	2325.0	2330.0	2325.0
27.5°	2311.3	2292.7	2258.1	2250.1	2236.9
30°	2231.5	2209.9	2170.1	2162.1	2151.3
32.5°	2146.0	2130.1	2087.3	2071.2	2060.5
35°	2063.2	2036.7	1993.9	1977.7	1964.4
37.5°	1969.8	1945.7	1903.0	1884.3	1871.0
40°	1873.8	1852.3	1809.5	1785.7	1774.9
42.5°	1780.4	1758.8	1716.4	1689.4	1673.7
45°	1679.0	1660.3	1620.1	1590.9	1580.2
47.5°	1580.2	1561.5	1518.7	1489.2	1473.4
50°	1476.0	1462.7	1425.2	1387.9	1374.6
52.5°	1374.6	1355.8	1321.3	1291.9	1273.2
55°	1270.6	1254.5	1222.5	1190.5	1177.1
57.5°	1166.4	1153.2	1118.3	1086.3	1075.5
60°	1062.2	1051.8	1014.3	984.9	977.0
62.5°	960.8	942.2	915.5	888.9	878.2
65°	856.9	840.8	814.1	790.1	776.8
67.5°	750.1	736.6	712.7	694.1	683.3
70°	651.3	640.5	616.5	597.8	587.3
72.5°	549.9	539.2	525.8	507.2	499.3
75°	448.3	443.2	429.6	413.8	419.1
77.5°	357.7	346.9	341.5	333.6	325.7
80°	267.1	264.2	258.9	250.9	245.5
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.3	106.7	104.2	96.0	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
90°	0.8	9.2	25.0	23.5	24.3
92.5°	15.8	21.4	22.2	22.9	22.9
95°	37.3	44.4	45.7	45.7	44.4
97.5°	62.0	68.6	71.4	71.4	71.4
100°	90.5	96.4	98.4	98.4	97.7
102.5°	120.6	125.0	127.8	128.6	127.8
105°	153.6	155.6	157.1	158.4	158.4
107.5°	186.2	189.2	189.2	189.8	186.2
110°	217.8	221.9	221.9	221.9	219.9

TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	252.0	256.4	255.6	253.5	252.0
115°	285.7	289.7	288.5	287.8	285.7
117.5°	319.1	324.7	321.1	319.1	317.0
120°	352.8	358.4	352.8	352.8	350.4
122.5°	383.3	390.5	386.9	384.9	383.3
125°	415.5	421.9	419.8	417.5	416.8
127.5°	446.8	454.8	452.0	448.9	446.8
130°	476.2	485.4	484.1	482.6	479.7
132.5°	509.1	516.2	516.7	513.2	511.1
135°	537.4	545.3	546.9	546.1	544.0
137.5°	569.0	575.4	576.7	576.2	573.1
140°	596.8	603.2	606.8	606.8	604.0
142.5°	625.4	631.8	633.8	634.6	631.8
145°	652.5	657.5	661.6	662.4	659.6
147.5°	676.7	683.1	686.1	687.4	684.6
150°	701.7	706.1	708.8	711.1	708.8
152.5°	723.9	728.2	731.7	734.6	731.7
155°	746.1	748.1	750.4	753.9	751.7
157.5°	765.2	766.7	768.0	773.1	769.5
160°	782.3	783.8	784.6	788.9	785.9
162.5°	798.1	798.1	798.9	803.7	800.1
165°	811.6	810.8	810.8	815.9	812.3
167.5°	823.9	821.5	821.5	826.6	823.0
170°	833.0	831.0	830.3	835.4	831.0
172.5°	839.4	837.4	836.6	841.7	837.4
175°	844.5	842.5	841.0	846.1	841.7
177.5°	847.3	845.3	843.7	848.1	843.7
180°	846.1	846.1	846.1	846.1	846.1

TEST NUMBER: P923586

CATALOG NUMBER: DFN2DIP-TR3F0-080D030US940-FLLFLL

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	13.57	14.71	14.28	15.44	16.31	13.14	14.28	13.85	15.01	15.88
	3H	15.24	16.27	15.97	17.01	17.90	14.77	15.80	15.50	16.54	17.44
	4H	15.84	16.80	16.58	17.55	18.46	15.37	16.34	16.11	17.09	17.99
	6H	16.24	17.14	17.00	17.90	18.82	15.77	16.67	16.53	17.43	18.35
	8H	16.35	17.20	17.12	17.98	18.91	15.88	16.74	16.65	17.51	18.44
	12H	16.41	17.22	17.18	17.99	18.94	15.93	16.75	16.70	17.52	18.47
4H	2H	14.06	15.03	14.81	15.78	16.69	13.72	14.69	14.46	15.44	16.35
	3H	15.94	16.75	16.70	17.54	18.46	15.55	16.36	16.31	17.15	18.07
	4H	16.66	17.40	17.43	18.18	19.14	16.26	16.99	17.03	17.78	18.73
	6H	17.18	17.82	17.97	18.63	19.59	16.78	17.42	17.57	18.23	19.19
	8H	17.33	17.93	18.13	18.74	19.71	16.93	17.52	17.72	18.33	19.30
	12H	17.42	17.95	18.23	18.78	19.76	17.00	17.54	17.82	18.36	19.34
8H	4H	16.88	17.47	17.67	18.28	19.25	16.52	17.11	17.31	17.92	18.89
	6H	17.51	18.00	18.33	18.85	19.82	17.15	17.64	17.97	18.49	19.47
	8H	17.72	18.16	18.56	19.01	20.00	17.36	17.80	18.20	18.65	19.64
	12H	17.86	18.25	18.70	19.09	20.13	17.48	17.87	18.32	18.71	19.76
12H	4H	16.87	17.41	17.69	18.24	19.22	16.52	17.06	17.34	17.89	18.87
	6H	17.54	17.98	18.37	18.82	19.81	17.19	17.63	18.02	18.48	19.47
	8H	17.79	18.17	18.62	19.01	20.06	17.43	17.82	18.27	18.66	19.71

END OF REPORT