

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: P912546

Luminaire Tested: DFN2DIP-TR3F0-030D030US850-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P912546
REPORT IS A COMBINATION OF REPORTS P900272 AND P897195
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR3F0-030D030US850-RLLFLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

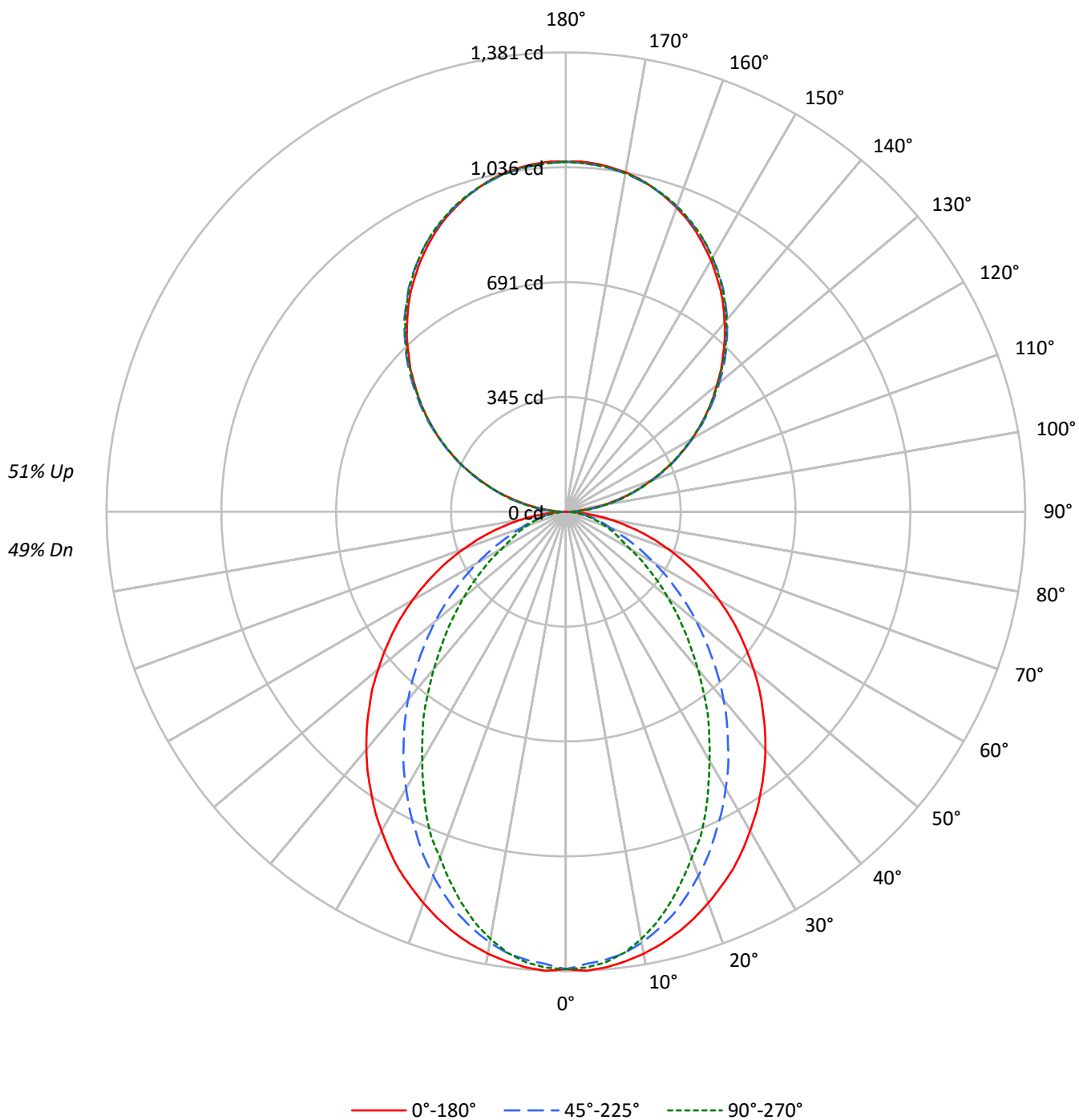
Lumens per Lamp: N/A
Luminaire Lumens: 5772.3 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.74' x L: 3.16' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 46.7
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: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

Luminous Intensity Polar Plot



TEST NUMBER: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55
1	98	94	90	87	90	87	84	81	73	71	69	61	59	58	50	49	48
2	90	83	77	72	82	76	71	67	65	61	58	54	51	49	44	42	41
3	82	73	66	60	75	68	61	57	58	53	49	48	45	42	40	37	35
4	75	65	57	51	69	60	54	48	51	46	42	43	40	36	36	33	31
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27
6	64	52	44	39	59	49	42	37	42	36	32	35	31	28	30	26	24
7	59	47	40	34	55	44	37	32	38	33	29	32	28	25	27	24	22
8	55	43	36	30	51	40	33	29	35	29	26	30	26	23	25	22	20
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18
10	48	36	29	24	44	34	28	23	30	24	21	25	21	19	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1713	1713	1713
5°	1715	1685	1696
10°	1697	1650	1640
15°	1673	1594	1553
20°	1641	1518	1448
25°	1609	1432	1346
30°	1565	1345	1217
35°	1522	1251	1104
40°	1479	1154	974
45°	1429	1046	857
50°	1376	938	742
55°	1322	822	632
60°	1258	701	519
65°	1185	579	466
70°	1097	464	420
75°	986	406	380
80°	825	336	326
85°	562	217	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1429 cd/sqm

TEST NUMBER: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	2.2
10°-20°	353.8	6.1
20°-30°	496.7	8.6
30°-40°	541.4	9.4
40°-50°	497.6	8.6
50°-60°	390.8	6.8
60°-70°	254.4	4.4
70°-80°	130.9	2.3
80°-90°	36.4	0.6
90°-100°	65.1	1.1
100°-110°	206.9	3.6
110°-120°	354.0	6.1
120°-130°	465.6	8.1
130°-140°	522.6	9.1
140°-150°	512.5	8.9
150°-160°	429.9	7.4
160°-170°	285.1	4.9
170°-180°	99.7	1.7
0°-30°	979.3	17.0
0°-40°	1520.7	26.3
0°-60°	2409.2	41.7
0°-90°	2830.9	49.0
90°-120°	626.0	10.8
90°-150°	2126.7	36.8
90°-180°	2941.0	51.0
0°-180°	5772.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1375	1369	1353	1364	1360	130
15°	1308	1294	1252	1228	1216	369
25°	1187	1147	1065	1014	995	546
35°	1023	959	850	772	744	640
45°	836	753	622	534	504	646
55°	636	539	404	330	306	568
65°	429	328	216	174	170	426
75°	229	142	100	91	90	242
85°	54	27	24	24	24	61
90°	1	11	31	29	30	6
95°	46	55	57	57	55	52
105°	191	194	195	197	197	202
115°	355	360	359	358	355	351
125°	517	525	522	519	518	462
135°	668	678	680	679	677	517
145°	812	818	823	824	820	507
155°	928	930	933	938	935	427
165°	1009	1008	1008	1015	1010	285
175°	1050	1048	1046	1052	1047	100
180°	1052	1052	1052	1052	1052	

TEST NUMBER: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1375.0	1375.0	1375.0	1375.0	1375.0
2.5°	1381.3	1375.0	1361.3	1373.8	1371.4
5°	1375.0	1368.8	1352.6	1363.8	1360.1
7.5°	1363.8	1356.4	1339.0	1343.9	1337.7
10°	1348.9	1340.2	1315.4	1311.5	1304.2
12.5°	1330.2	1319.0	1285.4	1278.0	1264.3
15°	1307.8	1294.1	1251.8	1228.2	1215.8
17.5°	1281.7	1261.8	1209.5	1182.2	1162.2
20°	1251.8	1226.9	1164.7	1133.7	1106.2
22.5°	1219.6	1190.8	1118.6	1076.4	1057.8
25°	1187.2	1147.3	1065.2	1014.2	995.4
27.5°	1148.6	1106.2	1015.4	957.0	928.2
30°	1107.6	1060.2	960.6	897.3	863.6
32.5°	1067.6	1010.4	908.5	833.7	802.6
35°	1022.9	959.4	849.9	771.5	744.1
37.5°	979.4	910.8	795.2	709.2	678.3
40°	933.3	858.7	737.9	649.5	617.3
42.5°	886.0	806.5	680.7	588.5	557.5
45°	836.3	752.8	622.3	533.8	503.9
47.5°	788.9	700.7	566.3	477.8	450.5
50°	736.7	648.3	511.5	425.5	399.5
52.5°	685.6	592.3	459.2	377.1	353.4
55°	635.8	538.8	404.3	329.8	306.2
57.5°	584.9	485.3	356.0	286.2	266.3
60°	532.5	433.1	304.9	241.4	221.6
62.5°	481.6	382.1	261.3	201.6	191.7
65°	429.3	328.5	216.5	174.2	170.5
67.5°	379.6	278.7	174.2	153.0	149.3
70°	327.3	230.2	144.3	131.9	126.9
72.5°	277.5	185.3	120.7	110.8	108.2
75°	228.9	141.8	99.6	90.8	89.6
77.5°	180.4	100.7	78.4	73.4	70.9
80°	135.6	72.2	59.7	54.8	54.8
82.5°	94.5	48.6	41.0	38.6	38.6
85°	53.5	27.3	23.6	23.6	23.6
87.5°	20.0	9.9	9.9	8.8	8.8
90°	1.0	11.4	31.1	29.2	30.2
92.5°	19.6	26.6	27.6	28.5	28.5
95°	46.4	55.2	56.8	56.8	55.2
97.5°	77.1	85.3	88.8	88.8	88.8
100°	112.6	119.9	122.4	122.4	121.5
102.5°	150.0	155.5	158.9	159.9	158.9
105°	191.0	193.5	195.4	197.0	197.0
107.5°	231.6	235.3	235.3	236.0	231.6
110°	270.9	276.0	276.0	276.0	273.5

TEST NUMBER: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	313.4	318.8	317.8	315.3	313.4
115°	355.3	360.3	358.8	357.9	355.3
117.5°	396.8	403.8	399.4	396.8	394.2
120°	438.7	445.7	438.7	438.7	435.8
122.5°	476.8	485.6	481.2	478.6	476.8
125°	516.8	524.7	522.1	519.2	518.3
127.5°	555.7	565.6	562.2	558.3	555.7
130°	592.2	603.6	602.1	600.2	596.6
132.5°	633.1	642.0	642.7	638.2	635.7
135°	668.4	678.2	680.1	679.2	676.6
137.5°	707.7	715.6	717.2	716.6	712.8
140°	742.3	750.2	754.7	754.7	751.1
142.5°	777.9	785.7	788.3	789.3	785.7
145°	811.5	817.8	822.9	823.8	820.3
147.5°	841.6	849.5	853.3	854.9	851.4
150°	872.7	878.1	881.5	884.4	881.5
152.5°	900.3	905.6	910.0	913.6	910.0
155°	927.9	930.3	933.2	937.7	934.9
157.5°	951.6	953.5	955.2	961.5	957.1
160°	972.9	974.8	975.8	981.1	977.4
162.5°	992.6	992.6	993.6	999.5	995.1
165°	1009.4	1008.4	1008.4	1014.7	1010.3
167.5°	1024.6	1021.7	1021.7	1028.0	1023.6
170°	1036.0	1033.5	1032.6	1038.9	1033.5
172.5°	1043.9	1041.5	1040.5	1046.8	1041.5
175°	1050.3	1047.8	1045.9	1052.2	1046.8
177.5°	1053.8	1051.2	1049.3	1054.8	1049.3
180°	1052.2	1052.2	1052.2	1052.2	1052.2

TEST NUMBER: P912546

CATALOG NUMBER: DFN2DIP-TR3F0-030D030US850-RLLFLL

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	8.87	9.70	9.85	10.68	11.97	4.85	5.67	5.82	6.65	7.94
	3H	10.54	11.28	11.52	12.27	13.58	6.03	6.77	7.02	7.76	9.07
	4H	11.14	11.84	12.14	12.83	14.15	6.48	7.17	7.48	8.17	9.49
	6H	11.56	12.20	12.56	13.20	14.53	6.79	7.43	7.80	8.43	9.76
	8H	11.68	12.29	12.69	13.30	14.63	6.88	7.49	7.90	8.51	9.83
	12H	11.74	12.32	12.75	13.32	14.67	6.92	7.50	7.94	8.51	9.86
4H	2H	8.89	9.59	9.89	10.58	11.90	5.44	6.14	6.44	7.13	8.45
	3H	10.71	11.29	11.72	12.31	13.64	6.78	7.36	7.79	8.38	9.72
	4H	11.39	11.92	12.41	12.94	14.29	7.33	7.85	8.34	8.87	10.22
	6H	11.90	12.35	12.93	13.39	14.74	7.74	8.19	8.77	9.23	10.58
	8H	12.07	12.49	13.10	13.52	14.89	7.86	8.29	8.89	9.32	10.69
	12H	12.16	12.54	13.21	13.59	14.96	7.93	8.31	8.97	9.35	10.73
8H	4H	11.36	11.78	12.39	12.81	14.18	7.60	8.02	8.63	9.06	10.42
	6H	11.91	12.26	12.97	13.34	14.70	8.11	8.46	9.16	9.53	10.90
	8H	12.12	12.43	13.19	13.49	14.87	8.30	8.60	9.36	9.66	11.05
	12H	12.26	12.53	13.32	13.58	15.00	8.41	8.68	9.48	9.73	11.16
12H	4H	11.31	11.69	12.36	12.74	14.11	7.60	7.98	8.65	9.03	10.40
	6H	11.89	12.20	12.95	13.26	14.64	8.16	8.46	9.22	9.52	10.91
	8H	12.10	12.37	13.17	13.43	14.85	8.36	8.63	9.43	9.69	11.11