

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: P912475

Luminaire Tested: DFN2DIP-TR2F0-030D040US850-RLONL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P912475
REPORT IS A COMBINATION OF REPORTS P901764 AND P897145
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-TR2F0-030D040US850-RLLONL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Open No Lens
Light Source: -
Ballast/Driver: -

Summary

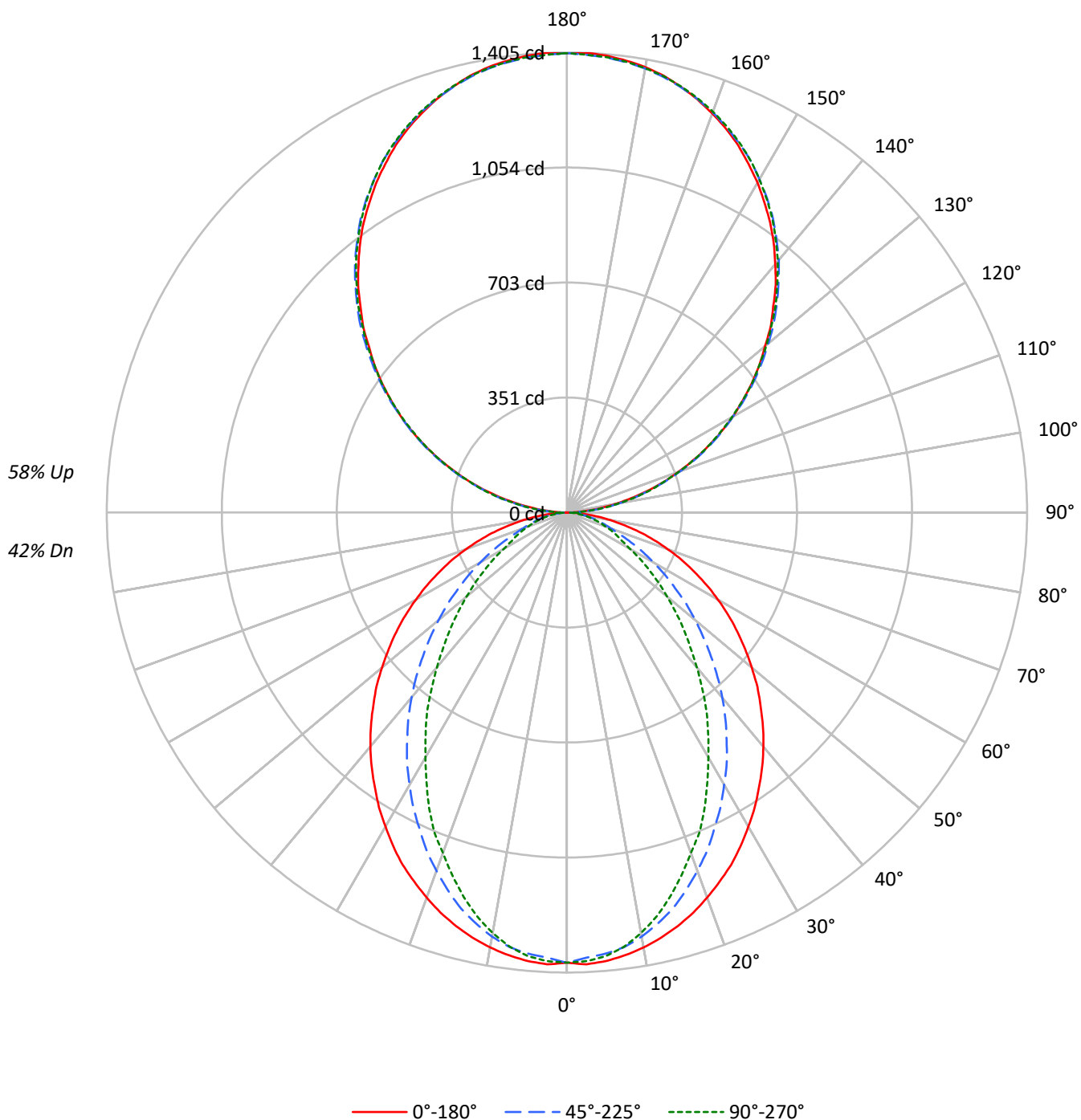
Lumens per Lamp: N/A
Luminaire Lumens: 6753.7 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.04' x L: 2.36' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 54.6
Input Voltage (V):
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
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49
1	96	92	89	85	88	84	81	78	70	67	65	56	55	53	44	43	42
2	88	81	75	70	80	74	69	65	61	58	55	50	47	45	39	37	36
3	81	72	65	59	73	66	60	55	55	50	47	44	41	39	35	33	31
4	74	64	56	50	67	58	52	47	49	44	40	40	36	33	31	29	27
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	28	26	24
6	63	51	43	38	57	47	40	35	40	34	30	33	29	26	26	23	21
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	24	21	19
8	54	42	34	29	49	39	32	28	33	28	24	27	23	21	22	19	17
9	50	38	31	26	46	36	29	25	30	25	22	25	21	19	20	18	16
10	47	35	28	24	43	33	26	22	28	23	19	23	19	17	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3067	3067	3067
5°	3067	3011	3032
10°	3032	2946	2929
15°	2986	2841	2771
20°	2926	2701	2580
25°	2865	2545	2395
30°	2785	2385	2163
35°	2705	2214	1959
40°	2624	2038	1726
45°	2531	1844	1515
50°	2433	1648	1310
55°	2331	1439	1113
60°	2213	1223	911
65°	2077	1004	814
70°	1912	799	730
75°	1703	692	653
80°	1404	561	551
85°	923	348	387

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2531 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	1.9
10°-20°	353.8	5.2
20°-30°	496.7	7.4
30°-40°	541.4	8.0
40°-50°	497.6	7.4
50°-60°	390.8	5.8
60°-70°	254.4	3.8
70°-80°	130.9	1.9
80°-90°	37.4	0.6
90°-100°	86.8	1.3
100°-110°	275.8	4.1
110°-120°	472.0	7.0
120°-130°	620.8	9.2
130°-140°	696.8	10.3
140°-150°	683.3	10.1
150°-160°	573.2	8.5
160°-170°	380.1	5.6
170°-180°	132.9	2.0
0°-30°	979.3	14.5
0°-40°	1520.7	22.5
0°-60°	2409.2	35.7
0°-90°	2831.9	41.9
90°-120°	834.7	12.4
90°-150°	2835.6	42.0
90°-180°	3922.0	58.1
0°-180°	6753.7	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	15	42	39	40	7
95°	62	74	76	76	74	69
105°	255	258	260	263	263	269
115°	474	480	478	477	474	469
125°	689	700	696	692	691	616
135°	891	904	907	906	902	689
145°	1082	1090	1097	1098	1094	676
155°	1237	1240	1244	1250	1246	569
165°	1346	1345	1345	1353	1347	380
175°	1400	1397	1394	1403	1396	133
180°	1403	1403	1403	1403	1403	

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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°	1.2	15.2	41.5	38.9	40.1
92.5°	26.2	35.5	36.8	38.0	38.0
95°	61.8	73.6	75.7	75.7	73.6
97.5°	102.8	113.8	118.4	118.4	118.4
100°	150.2	159.9	163.2	163.2	162.0
102.5°	200.1	207.3	211.9	213.1	211.9
105°	254.6	258.0	260.5	262.6	262.6
107.5°	308.7	313.8	313.8	314.6	308.7
110°	361.2	368.0	368.0	368.0	364.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	417.9	425.1	423.7	420.4	417.9
115°	473.7	480.5	478.3	477.1	473.7
117.5°	529.1	538.4	532.5	529.1	525.8
120°	585.0	594.2	585.0	585.0	581.1
122.5°	635.7	647.5	641.7	638.2	635.7
125°	689.0	699.6	696.2	692.3	691.1
127.5°	741.0	754.1	749.5	744.4	741.0
130°	789.6	804.9	802.8	800.3	795.6
132.5°	844.2	856.0	856.9	850.9	847.6
135°	891.2	904.3	906.8	905.5	902.2
137.5°	943.6	954.2	956.3	955.4	950.4
140°	989.7	1000.3	1006.2	1006.2	1001.5
142.5°	1037.1	1047.7	1051.0	1052.3	1047.7
145°	1081.9	1090.4	1097.1	1098.5	1093.8
147.5°	1122.1	1132.6	1137.7	1139.8	1135.2
150°	1163.6	1170.8	1175.4	1179.2	1175.4
152.5°	1200.4	1207.5	1213.5	1218.1	1213.5
155°	1237.1	1240.5	1244.3	1250.3	1246.4
157.5°	1268.9	1271.4	1273.5	1282.0	1276.0
160°	1297.2	1299.7	1301.0	1308.2	1303.1
162.5°	1323.4	1323.4	1324.7	1332.7	1326.8
165°	1345.9	1344.6	1344.6	1353.0	1347.1
167.5°	1366.2	1362.3	1362.3	1370.8	1364.8
170°	1381.4	1377.9	1376.7	1385.1	1377.9
172.5°	1391.9	1388.6	1387.2	1395.8	1388.6
175°	1400.4	1397.0	1394.5	1402.9	1395.8
177.5°	1405.1	1401.7	1399.1	1406.3	1399.1
180°	1402.9	1402.9	1402.9	1402.9	1402.9

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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	10.11	10.88	11.14	11.91	13.29	6.09	6.86	7.12	7.89	9.27
	3H	11.76	12.44	12.80	13.49	14.89	7.26	7.94	8.30	8.99	10.39
	4H	12.35	13.00	13.40	14.04	15.45	7.69	8.34	8.74	9.39	10.80
	6H	12.74	13.34	13.81	14.39	15.81	8.00	8.60	9.06	9.64	11.07
	8H	12.86	13.43	13.93	14.49	15.91	8.08	8.65	9.15	9.71	11.13
	12H	12.91	13.45	13.98	14.51	15.95	8.11	8.65	9.18	9.71	11.15
4H	2H	10.11	10.76	11.17	11.81	13.22	6.66	7.31	7.72	8.36	9.77
	3H	11.91	12.45	12.98	13.52	14.95	7.99	8.53	9.05	9.60	11.03
	4H	12.58	13.08	13.65	14.14	15.59	8.52	9.02	9.59	10.08	11.53
	6H	13.07	13.50	14.15	14.58	16.02	8.92	9.35	10.00	10.43	11.87
	8H	13.23	13.63	14.31	14.71	16.16	9.04	9.44	10.12	10.51	11.97
	12H	13.31	13.67	14.41	14.76	16.22	9.09	9.45	10.19	10.54	12.00
8H	4H	12.54	12.94	13.62	14.02	15.47	8.78	9.18	9.86	10.26	11.71
	6H	13.08	13.41	14.18	14.53	15.98	9.28	9.60	10.38	10.72	12.18
	8H	13.28	13.57	14.39	14.67	16.14	9.46	9.74	10.57	10.85	12.32
	12H	13.40	13.65	14.51	14.75	16.26	9.56	9.81	10.67	10.91	12.42
12H	4H	12.49	12.85	13.59	13.94	15.40	8.78	9.14	9.88	10.23	11.69
	6H	13.05	13.34	14.16	14.44	15.92	9.32	9.61	10.43	10.71	12.18
	8H	13.25	13.51	14.37	14.60	16.12	9.51	9.77	10.63	10.86	12.38

END OF REPORT